University of Alberta

# Tobacco Use, School Experiences and Counselling Guidelines: Exploring Themes of Connection for Adolescent Females

by

Jennifer Grace Thomson

A thesis submitted to the Faculty of Graduate Studies and Research in partial fulfillment of the requirements for the degree of Master of Education

in

Counselling Psychology

Department of Educational Psychology

Edmonton, Alberta

Spring 2005

0-494-08014-0

Library and Archives Canada

Published Heritage Branch

395 Wellington Street
Ottawa ON K1A 0N4
Canada

Bibliothèque et Archives Canada

Direction du Patrimoine de l'édition

395, rue Wellington
Ottawa ON K1A 0N4
Canada

*Your file Votre référence*
*ISBN:*
*Our file Notre reference*
*ISBN:*

NOTICE:
The author has granted a non-exclusive license allowing Library and Archives Canada to reproduce, publish, archive, preserve, conserve, communicate to the public by telecommunication or on the Internet, loan, distribute and sell theses worldwide, for commercial or non-commercial purposes, in microform, paper, electronic and/or any other formats.

The author retains copyright ownership and moral rights in this thesis. Neither the thesis nor substantial extracts from it may be printed or otherwise reproduced without the author's permission.

AVIS:
L'auteur a accordé une licence non exclusive permettant à la Bibliothèque et Archives Canada de reproduire, publier, archiver, sauvegarder, conserver, transmettre au public par télécommunication ou par l'Internet, prêter, distribuer et vendre des thèses partout dans le monde, à des fins commerciales ou autres, sur support microforme, papier, électronique et/ou autres formats.

L'auteur conserve la propriété du droit d'auteur et des droits moraux qui protège cette thèse. Ni la thèse ni des extraits substantiels de celle-ci ne doivent être imprimés ou autrement reproduits sans son autorisation.

---

In compliance with the Canadian Privacy Act some supporting forms may have been removed from this thesis.

While these forms may be included in the document page count, their removal does not represent any loss of content from the thesis.

Conformément à la loi canadienne sur la protection de la vie privée, quelques formulaires secondaires ont été enlevés de cette thèse.

Bien que ces formulaires aient inclus dans la pagination, il n'y aura aucun contenu manquant.

Canada

**Abstract**

This research study was developed to understand more about adolescent females' health behaviors and to provide counselling strategies for therapists. Two hundred and seventy four female participants responded to the *Student Health Survey* about their attitude toward school, approximate grades and average time each week spent on homework and on studying. By describing these variables as school connectedness, the first paper focuses on adolescent females' self-reported tobaccco consumption and determines what association exists between school connectedness and their rates of tobacco use. The second paper considers the impact of smoking cessation on school connectedness by distinguishing between the adolescent females' who quit using tobacco and those that are smokers. In the third paper, counsellors are provided with helpful guidelines for considering adolescent females' personal strengths and solutions as therapy interventions, for youth that are involved in at-risk behaviors.

The results of this research indicate that for the regularly smoking adolescent females, there were significant inverse associations with attitude toward school, approximate grades and time spent on homework. Adolescent females who reported cessation of tobacco, relative to the active tobacco users, were found to have a significant association with attitude toward school. Therefore, counselling methods to reconnect adolescent females to themselves and their school are provided, in order to enhance their personal and academic health.

**Acknowledgements**

In remembrance of W.G Thomson

First I want to thank Dr. Gretchen Hess, for your clear and steadfast direction, even when I felt like I was lost. I also want to acknowledge all the friends, colleagues and instructors that supported and believed in me. Special recognition goes to Kourch, whose love, resolve and reassurance made graduate school seem feasible. To my mom, who has always had faith in me. To all my family, especially Christy, Samantha and Craig, because your achievements have inspired me. And a special appreciation goes to the five fantastic women who journeyed with me through grad school - your success has paved the way for me! And finally, extra special thanks to Cathy for your collaboration and encouragement during the development of this thesis.

## Table of Contents


Chapter 1 - Introduction and Statement of the Problem ____ 1

Theoretical Perspective ____ 1

Plan of Study ____ 2

Research Questions ____ 3

Instrument and Participants ____ 3

Method ____ 4

Overview of Chapters ____ 5

References ____ 6

Chapter 2 - What is the Association between Self-Reports of Tobacco Use and the Experience of School Connectedness for Adolescent Females? ____ 9

Research Rationale ____ 9

Literature Review ____ 11

School Factors and Adolescent Tobacco Use ____ 11

School Factors, Tobacco Use and Adolescent Females ____ 14

Method ____ 16

Participants ____ 16

Instrument ____ 16

Ethics Approval and Procedures ____ 17

Data Analysis ____ 18

Results ____ 20

Discussion ____ 28

Limitations and Future Studies ____ 30

References ____ 32

Chapter 3 - Will There be an Association between Cessation of Tobacco and the Experience of School Connectedness for Adolescent Females? 38

Research Rationale 38

Literature Review 42

Issues of Tobacco Cessation 42

School Factors and Adolescent Tobacco Cessation 43

Method 46

Participants 46

Instrument 46

Ethics Approval and Procedures 48

Data Analysis 48

Results 51

Discussion 56

Limitations and Future Studies 59

References 61

Chapter 4 - Counselling Guidelines: a Practical Guide to Counselling the Adolescent Female Client and Creating Reconnection to her Authentic Self 68

References 80

Chapter 5 - Tobacco Use, School Experiences and Counselling Guidelines: Exploring Themes of Connection for Adolescent Females 84

Summary and Research Findings 84

Final Thoughts 86

References 88

Appendix - Student Health Survey 89

**List of Tables and Figures**

*Chapter 2 (Paper 1)*

Table 2-1: Chi Square Attitude Toward School ____ 21

Table 2-2: Chi Square Approximate Grade Average ____ 22

Table 2-3: Chi Square Average Homework Time Per Week ____ 23

Table 2-4: Chi Square Average Study Time Per Week ____ 24

Table 2-5: Attitude Toward School Chart ____ 25

Figure 2-1: Adolescent Females' Attitude Toward School ____ 25

Table 2-6: Approximate Grade Average Chart ____ 26

Figure 2-2: Adolescent Females' Approximate Grade Average ____ 26

Table 2-7: Homework Time Per Week Chart ____ 27

Figure 2-3: Adolescent Females' Homework Time Per Week ____ 27

*Chapter 3 (Paper 2)*

Table 3-1: Chi Square Attitude Toward School ____ 51

Table 3-2: Chi Square Approximate Grade Average ____ 52

Table 3-3: Chi Square Average Homework Time Per Week ____ 53

Table 3-4: Chi Square Average Study Time Per Week ____ 54

Figure 3-1: Adolescent Females' Attitude Toward School ____ 55

*Chapter 4 (Paper 3)*

Figure 4-1: Summary of Solution/Strengths Approaches to Counselling ____ 74

CHAPTER 1

## Introduction

## Tobacco Use, School Experiences and Counselling Guidelines: Exploring Themes of Connection for Adolescent Girls

### Statement of the Problem

It has been widely accepted that cigarette use has both specific and serious consequences for everyone. However, since adolescent girls are reported to be using tobacco in greater numbers than any other group, addressing cigarette smoking in this population is of particular importance. The early use of tobacco has implications for women's health and morbidity. In fact, there is widespread confirmation about health consequences such as heart problems and cancer (Engels, Knibbe & Drop, 1997). Therefore, it is a concern when the 2003 Alberta Alcohol and Drug Abuse Commission (AADAC) survey research estimates that tobacco is the only substance with rates higher for adolescent girls (18.2%) than boys (13.1%). In addition, health practitioners believe that there is a greater prevalence of girls that initiate smoking, in contrast to the overall smoking rates which are experiencing a small decline (Dunn & Johnson, 2001; Waldron, Lye & Brandon, 1991).

Since at least the 1970's, researchers have attempted to understand the reasons youth have for smoking (Olds & Thombs, 2001). Comparisons between students that are actively engaging in tobacco use with their nonsmoking peers have resulted in ideas for prevention and treatment. However, to ensure relevant conclusions, the issue of gender needs to be addressed, since "if the questions are not framed through a gender lens, then there is little chance that such differences and explanations will be discovered" (MacDonald and Wright, 2002, p.284).

At this point, there are theories about what factors influence adolescent girls to engage in and commit to this health-related behavior. Yet, the studies have used different methods to measure tobacco consumption and have included a variety of participants in terms of age, class, ethnicity, geography, family and peer dynamics and personalities. Therefore, it has been challenging to organize all the research results into a comprehensive pattern of female adolescent tobacco use (MacDonald & Wright, 2002).

### Theoretical Perspective

The theoretical work on adolescent smoking behavior has focused on understanding social-psychological reasons for acquisition and cessation (Wang, Fitzhugh, Green, Turner, Eddy & Westerfield, 1999). One perspective, which views behavior as the product of social forces, addresses the role of bonding to conventional sources and how this impacts deviance (Krohn, Massey, Skinner & Lauer, 1983). Social Bonding Theory, developed by Hirschi, proposed that there are interrelated elements that bond the adolescent to society: attachment, commitment, and involvement (Lothian, 2002). If

there is a weakening of connection to society and what is valued as appropriate, the adolescent will be at risk to consider tobacco use. For example, when students have poor academic grades, or feel negatively about their school, or fear school failure, they may use tobacco as a response to their lack of integration (Leventhal & Cleary, 1980). There is also speculation that increased school involvement influences the probability of tobacco cessation (Skinner, Massey, Krohn & Lauer, 1985).

For girls in particular, the weakening of ties to her school system may create a greater likelihood that she attains beliefs favorable to smoking (van Roosmalen & McDaniel, 1992). As well, Sarason, Mankowski, Peterson and Dinh (1992) have found that the reasons that girls start smoking tend to keep them smoking, thus they continue to use tobacco. Reasons may include a sense of rebellion, and adolescent girls may find that smoking becomes a powerful way to indicate their dissatisfaction with school and their social reality (Krohn, Naughton, Skinner, Becker & Laurer, 1986). Researchers suggest that there are differences for girls and that their perceptions of their social identity, their academic abilities and their school may all become relevant when making choices about initiating, maintaining or ceasing tobacco use.

## Plan of Study

Since there are various reasons that could influence adolescent girls to smoke, an attempt has been made to review one of the most influential factors: their environment. Common to most youth is their commitment to attend school, and as a result school becomes a place where they spend the majority of their time. This domain has now become an appropriate area of research interest for parents, counsellors and educators. In fact, AADAC (2003) has found that school factors are implicated as risk or protective features for substance use.

In this regard, the concept of school connection has been recognized by AADAC (2003) as a significant variable when assessing correlations between frequency of harmful or dependent tobacco use and protective factors for risk behaviors. Other researchers have also explored this dimension. Dalton's (1998) study about adolescent smoking used the variable school bonding, and measured this through commitment and satisfaction with school, academic expectations, academic achievement and truancy behavior. Scal, Ireland and Wagman Borowsky (2003) designed their study to include the variable *school connectedness*, which required students to rate 6 items including: "feel part of your school", "happy to be at your school", "close to people at school". In addition, Dierker, Avenevoli, Goldberg and Glantz (2004) created a school construct to measure *school connectedness* for adolescents. In this study, they operationalized *school connectedness* using items assessing the students' perceptions of school, including teachers, peers and overall environment, and their approximate grades on school subjects.

More ideas about what patterns are occurring for late adolescent girls who are engaging in tobacco use are necessary (Seguire & Chalmers, 2000). The previous research supports using teenage girls' experience of school connectedness as a basis for further

study. Therefore, the aim of this thesis is to contribute to the research that has examined the influence of school connectedness and tobacco use, with the emphasis on adolescent girls and their experiences and requirements for counselling interventions.

### *Research Questions*

1. For adolescent high school girls, is there an association between their self-reported levels of tobacco use, based on a continuum from none to regular use, and their experience of school connectedness? Using survey variables to measure their attitude toward school, their estimates of their school grades, their time spent on homework and studying, the resulting concept of *school connectedness*, in relation to level of *tobacco use*, has been examined.

2. If any associations between tobacco use and school connectedness are discovered for adolescent girls, is their *cessation of tobacco* associated with their school attitude, estimated grades, or homework and study time (school connectedness), in comparison with girls that are occasionally or regularly using tobacco?

3. What are the counselling implications for working with adolescent girls that are engaging in tobacco use or other risk taking activities? How can a strengths-based perspective be used to establish the counselling relationship and to assist adolescent girls to develop healthy coping strategies?

### *Instrument and Participants*

High school students from a rural Alberta community, outside of Edmonton, were recruited to complete a survey designed to understand adolescent attitudes and behaviors. Originally called the Adolescent Sexuality Survey, and renamed the *Student Health Survey* (SHS), it was based on research by Fehlauer (1992) and Hess and Schnirer (1996). The SHS was designed to ask adolescents about their experiences in school, as well as personal questions about their sexual and health-related behaviors. Two hundred thirty eight males and 274 females agreed to complete the survey. The participation of these 512 adolescents was voluntary and informed consent was obtained from all involved parents, school personnel and students. At the time of administration, the purpose of the study was clarified and all participants were aware of their ability to discontinue with the research at any time during the survey. The confidential nature of the research was assured and was supervised by Hess. Participants were required to respond to both multiple choice and short answer questions, and the resulting data was used for the purpose of understanding adolescent sexuality and health by University of Alberta graduate students. In 2003, permission was given by the University of Alberta Faculties of Education and Extension Research Ethics Board to use the results from the *Student Health Survey* for this current research study.

***Method***

For this research project, the participants were female high school students with an average age of 17 who responded to the SHS about their attitudes and behaviors with regards to health-related behaviors. Similar to other studies that focused on school factors, the variable *school connectedness* was operationalized using the participant's attitude toward school, estimated grade average and time spent on homework and studying. Other researchers have linked these aspects to tobacco use (Choi, Pierce, Gilpin, Farkas & Berry, 1997; Hu, Lin & Keeler, 1998; Lloyd-Richardson, Papandonatos, Kazura, Stanton & Niaura, 2002). The answers that pertained to the adolescent females' tobacco use were the focus, in order to determine whether there was a relationship between their self-reported tobacco use and their experience of school connectedness.

Since the original research provided the students with five possible answers for tobacco use, including none, rarely, occasional, have quit and regular use, the female participants were categorized. For the first research question, on associations between tobacco use and school connectedness, only the responses from the current tobacco users and the nonsmokers were used, and the students that quit tobacco were excluded. In the past, tobacco use prevalence has been defined in terms of behavior, using measures such as nonsmoker, experimental smoker, occasional smoker and regular smoker (Akerstream, 1997). Isolating the participants who are actively smoking should capture the distinct aspects of smoking behavior (Orlando, Ellickson & Jinnett, 2001).

For the second research question, the concept of school connectedness (attitude toward school, grade average, time spent on homework and studying) was again applied to tobacco use. However, the female students who agreed they had quit using tobacco became the focus, and they were contrasted with the occasional and current tobacco users. Since the area of interest was former tobacco users, it was determined that using the nonsmokers and the rare smokers could reduce the magnitude of any possible associations to school connectedness. Thus these responses were omitted from the data set, in order to allow for statistical analysis. As well, using only the remaining categories of tobacco use could reflect the degree of nicotine dependence, which may be a factor in quitting behavior (Lloyd-Richardson et al., 2002).

The final question reviewed counselling issues for young women who are engaged in at-risk behaviors. A framework for conceptualizing the social reality that influences adolescent females will be provided, as well as ideas to capitalize on the strengths and assets that are inherent within girls. Specific strategies will be outlined to provide resources for counsellors, educators and caregivers that are supporting these adolescent students. Included will be guidelines to help practitioners understand how "at-risk" activities are used as coping strategies by adolescent females; these strategies need to be acknowledged, at the same time as other options are enhanced. Research reminds us that, "interventions that do not engage the functions that smoking serves for adolescents are less likely to affect their smoking behavior" (Turbin, Jessor & Costa, 2000, p.123). Ideas to assist adolescent women to re-connect with an authentic self will also be presented, with the aim for counselling to create "a more complex vision of self-identity

as a means of connecting young people's ideas about themselves with their concrete health behaviors" (Katja, Paivi, Marja-Terttu & Pekka, 2002, p.247).

## Overview of Chapters

There are five sections to this research thesis. The first chapter focuses on the relevance of this topic and an introduction to the research plan is provided. The second and third chapters explore the associations between school connectedness and self-reported tobacco use for the adolescent female participants from the *Student Health Survey*. The fourth chapter outlines counselling strategies and interventions for adolescent girls that are engaged in at-risk behaviors, such as tobacco use. The final chapter summarizes the results and presents ideas for additional consideration.

## References

Akerstream, J. (1997). *Investigating smoking behavior and beliefs about smoking among Manitoba students aged 9-18 years.* (Master's Thesis). University of Manitoba, Canada.

Alberta Alcohol and Drug Use Commission (AADAC) (2003). *The Alberta youth experience survey 2002: Summary report.* Edmonton, Alberta.

Choi, W., Pierce, J., Gilpin, E., Farkas, A., & Berry, C. (1997). Which adolescent experimenters progress to established smoking in the United States. *American Journal of Preventative Medicine, 13(5)*, 385-391.

Dalton, C. (1998). *Experimentation, initiation and maintenance of adolescent smoking behavior.* (Master's Thesis). Lakehead University, Canada.

Dierker, L., Avenevoli, S., Goldberg, A., & Glantz, M. (2004). Defining subgroups of adolescents at risk for experimental and regular smoking. *Prevention Science, 5(3)*, 169-183.

Dunn, D., & Johnson, J., (2001). Choosing to remain smoke-free: The experiences of adolescent girls. *Journal of Adolescent Health, 29*, 289-297.

Engels, R., Knibbe, R., & Drop, M. (1997). Inconsistencies in adolescents' self-reports of initiation of alcohol and tobacco use. *Addictive Behaviors, 22(5),* 613-623.

Fehlauer, E. (1992). *Attitudes, influences and expectations of adolescent dating behaviors: A survey of high school students*, (Master's Thesis). University of Alberta, Canada.

Hess, G., & Schnirer, L., (1996). *Adolescent sexuality in rural alberta.* (Master's Thesis). University of Alberta, Canada.

Hu, T., Lin, Z., & Keeler. (1998). Teenage smoking, attempts to quit and school performance. *American Journal of Public Health, 88(6)*, 940-943.

Katja, R., Paivi, A., Marja-Terttu, T., & Pekka, L. (2002). Relationships among adolescent subjective well-being, health behavior and school satisfaction. *Journal of School Health, 72,* 243-249.

Krohn, M., Massey, J., Skinner, W., & Lauer, R. (1983). Social bonding theory and adolescent cigarette smoking: A longitudinal analysis. *Journal of Health and Social Behavior, 24,* 337-349.

Krohn, M., Naughton, M., Skinner, W., Becker, S., & Laurer, R. (1986). Social disaffection, friendship patterns and adolescent cigarette use: The muscatine study. *Journal of School Health, 56(4),* 146-150.

Leventhal, H., & Cleary, P. (1980). The smoking problem: a review of the research and theory in behavioral risk modification. *Psychological Bulletin, 88,* 370-405.

Lloyd-Richardson, E., Papandonatos, G., Kazura, A., Stanton, C., & Niaura, R. (2002). Differentiating stages of smoking intensity among adolescents: Stage specific psychological and social influences. *Journal of Consulting and Clinical Psychology, 70(4),* 998-1009.

Lothian, S. (2002). *Understanding adolescent smoking behavior: An ecological approach.* (Dissertation), University of Western Ontario, Canada.

MacDonald, M., & Wright, N. (2002). Cigarette smoking and the disenfranchisement of adolescent girls: A discourse of resistance. *Health Care for Women International, 23,* 281-305.

Olds, S., & Thombs, D. (2001). The relationship of adolescent perceptions of peer norms and parent involvement to cigarette and alcohol use. *Journal of School Health, 71(6),* 223-228.

Orlando, M., Ellickson, P., & Jinnett, K. (2001). The temporal relationship between emotional distress and cigarette smoking during adolescence and young adulthood. *Journal of Consulting and Clinical Psychology, 69(6),* 959-970.

Sarason, I., Mankowski, E., Peterson, A. & Dinh, K. (1992). Adolescent's reasons for smoking. *Journal of School Health, 62(5),* 185-190.

Scal, P., Ireland, M., & Wagman Borowsky, I. (2003). Smoking among American adolescents: A risk and protective factor analysis. *Journal of Community Health, 28(2),* 79-97.

Seguire, M. & Chalmers, K. (2000). Late adolescent female smoking. *Journal of Advanced Nursing, 31(6),* 1422-1429.

Skinner, W., Massey, J., Krohn, M., & Lauer, R. (1985). Social influences and constraints on the initiation and cessation of adolescent tobacco use. *Journal of Behavioral Medicine, 8,* 353-371.

Turbin, M., Jessor, R., & Costa, F. (2000). Adolescent cigarette smoking: health related behavior or normative transgression. *Prevention Science, 1(3),* 115-124.

van Roosmalen, E., & McDaniel, S. (1992). Adolesent smoking intentions: Gender differences in peer context. *Adolescence, 27,* 87-105.

Waldron, I., Lye, D., & Brandon, A. (1991). Gender differences in teenage smoking. *Women and Health, 17,* 65-90.

Wang, M., Fitzhugh, E., Green, B., Turner, L., Eddy, J., & Westerfield, C. (1999). Prospective social-psychological factors of adolescent smoking progression. *Journal of Adolescent Health, 24,* 2-9.

CHAPTER 2

## What is the Association between Self-Reports of Tobacco Use and the Experience of School Connectedness for Adolescent Females

The widespread use of tobacco by Canadian adolescent females has been a topic of interest for many researchers and policy makers. This is in response to the consensus among health professionals that smoking is the leading cause of premature death among Canadian women (Greaves, 1996). To help combat this, the use of cigarettes by youth is legally restricted, since each Canadian province has guidelines to regulate the sale of tobacco to minors. With the aim of addressing the health concerns and policy aspects of tobacco use, the federal government passed the Tobacco Act in 1997 to protect youth by restricting their access to cigarettes (Health Canada, 2005). This legislative acknowledgment that tobacco use among teens is problematic confirms that research on this topic is necessary to understand the lure of tobacco for adolescents.

Yet, Canadian youth are continuing to smoke, despite the warnings and restrictions for tobacco use. In fact, 85% of Canadians who have ever smoked a cigarette said that they had smoked their first cigarette by age 18 (Health Canada, 2001). Past efforts to understand this behavior was shaped by viewing tobacco use as only a health behavior (Perry & Staufacker, 1996). However, researchers have suggested that it is time to recognize that smoking is a social behavior with consequences, reasons and functions that are reinforced by the users' personal factors (Maes & Lievens, 2001).

As a result, research needs to be directed toward comprehending each aspect that could influence adolescent tobacco use (Tyas & Pederson, 1998). The hope is that if educational researchers can modify these aspects within the youth's environment, then personal change may occur, leading to a reduction in smoking rates. Since a typical adolescent could spent about 16,000 hours in her school, the effects of this experience should be given research attention (Lothian, 2002). The aim of this paper is to focus on the associations that occur between tobacco use and the adolescent females' impression of school connectedness. Other researchers have used this concept to review students' beliefs about their school experience (Dierker, Avenevoli, Goldberg & Glantz, 2004; Scal, Ireland, & Wagman Borowsky, 2003). The premise of this study is that tobacco use is a social phenomenon, and is affected by the influence of school factors, such as attitude toward school, grades and time spent on homework and studying. By conceptualizing these variables as school connectedness, this research will demonstrate the association between tobacco use and school connectedness for adolescent females.

### *Research Rationale*

Undeniably, early onset of smoking is a predictor for adult smoking (Kandel, Yamaguchi & Chen, 1992). It is estimated that the adolescent that begins smoking tobacco will continue for at least 16 years, and 20 years for females (Pierce & Gilpin, 1996). As well, there is a difference in health effects for young women. Pope, Ashley and Ferrence (1999) have identified that tobacco use impacts womens' life expectancy, reproductive

health, and chronic illness. American research from the Surgeon General's Report (2004) has revealed for the first time that smoking causes diseases in nearly every organ in the body and is as a risk factor for both breast and cervical cancer. The rate of heart disease is also higher for women that are smoking than for nonsmokers (Faucher, 2002).

Medical research suggests that women are more susceptible to the carcinogenic effects of smoking cigarettes and that their lung function is more adversely impacted (Alberta Alcohol and Drug Abuse Commission [AADAC], 2004). These consequences are related to the research which has shown that being in the same environment as those using cigarettes can have health implications. Second-hand smoke has twice as much nicotine and tar as the smoke that cigarette users inhale, so teens who are spending time with smokers will themselves absorb some of the toxic chemicals and carcinogens from their friends' tobacco habits. Immediate effects, especially at indoor locations, include increased coughing, sore throat and eye irritation. The cold Canadian climate ensures that indoor exposure to environmental tobacco smoke (ETS) can be a valid concern.

Psychosocial theories explain what influences youth to acquire tobacco using behaviors. For example, Problem Behavior Theory, conceptualized to provide a framework for understanding the evolution of adolescent risk behaviors, defines the social and environmental factors of influence. This social-psychological approach addresses the exchange between the personality, behavioral and perceived environmental systems that develop the adolescent. The original developers, Richard and Shirley Jessor, began forming their theory for adolescent behavior more than 30 years ago (Donovan, 1996). Initially this perspective was applied to adolescent alcohol abuse, with the recognition that youth engaged in this behavior as a way to attain goals within their circumstances. As Jessor (1987) explained, "the goals that are attached to drinking, the meanings it has for the drinker, the various ways in which alcohol comes to be used, and even its experienced and observed effects" are related to the adolescent's external conditions (p.331).

Thus, Jessor wanted his theory to go beyond the personal qualities of genetics and biology and to include context and experience. His explanation needed to account for both the social and the psychological world of the adolescent. Therefore, Problem Behavior Theory has put the focus on the interaction between the person and their environment as the source for adolescent behaviors (Jessor, 1987). For example, with tobacco use, the adolescents' attitudes and beliefs, in combination with their circumstances, including school, family and friends, are considered to be the antecedents of smoking (Carvajal, Wiatrek, Evans, Knee & Nash, 2000).

To complement Jessor, studies are recognizing that smoking behavior interacts with gender (Sarigiani, Ryan & Petersen, 1999; Snow & Bruce, 2003). For example, there are differential gender issues with regards to overall motivation for smoking. The role of the social context needs to be considered, since society influences girls' self-esteem and self-image (Sarigiani et al., 1999). Young girls can be especially attentive to media and advertising campaigns that suggest tobacco use as a desirable lifestyle behavior. Indeed, tobacco use "is characterized by those who peddle its material form, the cigarette, in

terms of youth, beauty, sexual appeal, personal success and independence" (Gritz, 1984, p.103). Therefore, smoking becomes a strategy for an adolescent female to manage her image, her emotions and her affiliation with school and peers.

Therefore, the research emphasis has moved away from treating smoking as only a health behavior and began addressing the interaction between personal factors and the environment. Studies first began to focus on the characteristics of schools as factors in tobacco use, then added the more personal aspect of the effects of school on adolescents themselves (Novak & Clayton, 2001). Indeed, Mettlin, in 1976, proposed that smoking is due to the meeting of a susceptible individual with a social environment that favors tobacco use. Current research still confirms this idea. Scal et al., (2003) advised that for girls, being exposed to smoking at school was a significant risk, making them perhaps more personally vulnerable to their external circumstances.

Studies continued to discover the impact of school variables and the students' experiences for tobacco decision making. Krohn, Naughton, Skinner, Becker and Lauer (1986) suggested "the need to take the relationship adolescents have with school into account in explaining and preventing cigarette use" (p.149). Hu, Lin and Keeler (1998) recognized that "the better the student does scholastically, the less likely she or he is to become a smoker" (p.940). Jackson (1997) found that a positive orientation toward school was inversely associated with tobacco and alcohol use. Sarigiani et al. (1999) wrote that "adolescents who smoke have lower grade point averages and frequent cigarette use is associated with lower levels of reported school connectedness" (p.110). Students who have dropped out of school tend to have higher smoking rates than those attending school (Siqueira, Diab, Bodian & Rolnitzky, 2000). As well, AADAC (2003) confirmed that connection to school was one of the top factors to provide protection from harmful activities, including tobacco. In all likelihood, there are associations between tobacco use and school factors; therefore this paper reviews the influence of school connectedness to help understand adolescent females' tobacco use, in order to contribute to the research. The following literature review will present the studies that outline the relationships between tobacco use, school factors and adolescents, then will focus specifically on the research developments for adolescent females.

## Literature Review

### *School Factors and Adolescent Tobacco Use*

Educational psychologists recognize that attending school positions youth to make decisions about issues other than their choice of classes and their intramural activities. They are required to manage and evaluate the often complicated social, academic, and school related challenges that become present as youth progress through their education years. In the following studies, it is agreed that there are associations between the tobacco use of adolescents and certain school factors, including school connection.

Researchers have suggested that social situations where adolescents were exposed to peers that used tobacco were influential for smoking initiation (van Roosmalen & McDaniel, 1992). Further studies found consistent associations between school experiences and adolescent substance use (Jessor, Van Den Bos, Vanderryn, Costa & Turbin, 1995; Petraitis, Flay & Miller, 1995). Currently, research suggests that "among adolescents, academic experiences and substance use are likely involved in a reciprocal relationship that evolves over time" (Bryant & Zimmerman, 2002, p.633).

Krohn, et al., (1986) have promoted their concept of social disaffection as a predisposition for teens to associate with smoking peers. When youth are dissatisfied with their school or family connections, which are the main sponsors of conventional lifestyles, they become susceptible to alternative behaviors such as cigarette use. Smoking peers exhibit values and lifestyles that may attract academically unsuccessful youth, and these networks of friends that smoke become a source of connection. This American study of students from grades 9-12 found that "school-related scales were the most effective predictors of association with friends that smoke" and that these circumstances became the "most important predictor of cigarette use" (p.149). Ultimately, positive attitudes towards school, success in school, and participation in school activities were inversely related to smoking for both males and females.

Following this study, Clayton (1991) suggested in his literature review on variables found to have similar associations with smoking among adolescents, that students using tobacco are less interested in school and less successful in school. As well, in a longitudinal research project, Jackson, Henriksen, Dickinson, Messer and Bridges- Robertson (1998) surveyed young students to complement retrospective studies addressing adolescent substance use rates. Their results indicated that poor grades at school were one of the risk factors for smoking initiation and continuation.

Choi, Pierce, Gilpin, Farkas and Berry (1997) used adolescents' self-reported school performance ratings to support their hypothesis that an inverse relationship existed between academic performance in school and cigarette smoking. By using an American national sample of 12-18 year olds, they examined teenage smoking. They found that perceived school performance helped predict smoking transitions. Those students that believed they were academically average or below their peers, were found to be twice as likely to increase tobacco use in a progressive manner. Tucker, Ellickson and Klein (2003) also found that students' poor grades and weak academic orientation become significant risk factors for regular smoking during middle adolescence.

Hu, Lin and Keeler (1998) found that school performance was an important factor in predicting smoking through their survey of teenagers between 12 and 17 years old; the better a student was doing scholastically, the less likely they would start smoking. They suggest that school performance be treated as an explanatory variable for smoking because, "teenage school performance often reflects certain qualities during adolescence, such as dependability, self-confidence, and intellectual investment. Educational success can be viewed as a broad construct that includes components of motivation, educational commitment, and a sense of control over one's present and future" (p.942). Ultimately,

when students' lack success in school, they experience a loss of opportunity both in the present and possibly the future.

In 1998, Tyas and Pederson proposed a theoretical framework to understand the development of adolescent smoking behaviors. Their literature review proposed that there is a consistent relationship between smoking status and school performance. Other school factors, such as commitment to school and educational attainment, were also described as protective effects against tobacco use. These variables were classified as behavioral factors since they represent actions that were necessary for academic success.

To enhance the awareness of adolescent smoking behavior from a social-psychological perspective, Wang, Fitzhugh, Green, Turner, Eddy and Westerfield (1999) decided to examine predictor variables. They used scales to measure factors, such as school behavior, in order to evaluate smoking status over a three year span. The school dimension was captured by asking the participants about their school attitude, academic achievement and class attendance. The age range for the initial survey was 12-18, and the youth were classified as either regular, experimental or nonsmokers. They found that adolescents' self-rated school performance was a significant predictor of smoking progression from nonsmokers to experimenters. In addition, participants dislike of school, absence from class and poor school performance were also significant predictors of progression from nonsmokers to regular smokers.

Soldz and Cui (2001) used longitudinal data to develop a risk factor index to assist with predicting smoking behavior in youth. Students from 6$^{th}$ through 12$^{th}$ grades in 26 different schools were identified and studied. They isolated certain risk factors, including grade point average, truancy and post high school plans. Soldz and Cui found that their factors were able to predict both smoking and level of smoking for both genders. They suggested that students can be selected for tobacco prevention involvement, based on assessing their risk factors for tobacco use.

Another research study recruited more than 20,000 American adolescents, using students from grades 7 through 12, with a mean age of 16 years old (Lloyd-Richardson, Papandonatos, Kazura, Stanton & Niaura, 2002). They found that low school connectedness had a significant, although relatively weak, relationship to increase the chances of smoking initiation and experimentation. Of interest, there was a statistically stronger effect for low school connectedness and accelerating the transition towards regular smoking, which was defined as daily smoking. Their research suggested that there were variables, such as school connectedness, which could help researchers understand what differentiates the regular smokers from never or experimental users.

In their analysis of youth smoking, an influential factor that Scal, Ireland and Wagman Borowsky (2003) found across gender and grade group cohorts, was learning problems. Composed of getting homework completed and attention abilities, this aspect was included as a powerful predictor of transitioning to smoking. They completed an analysis of factors that increased the risk of smoking, as well as possible protective influences. For the latter, a universal protective factor included high grade point average, especially

for older girls. The experience of academic achievement was also protective for all students, grades 7 through 12. Also, protective for all groups of girls was school connection, which was described as the academic and social experience within school.

*School Factors, Tobacco Use and Adolescent Females*

With regards to school factors in particular, what does the research suggest may be occurring for adolescent females? Girls seem more vulnerable to the allure of using tobacco (Gritz, 1984). French and Perry (1996) stated that the changing roles of women, with the focus on emancipation, influenced the rise of tobacco use. This was in part due to advertising messages that promoted using cigarettes as a means of showing independence. Perhaps because of persuasion, opportunity or choice, girls are likely to use cigarettes for different reasons than boys (CASA, 2003; Michell & Amos,1997). As well, Sarason, Mankowski, Peterson and Dinh (1992) have found that the reasons that girls start smoking tend to keep them smoking, thus they will continue to use tobacco. Reasons may include a sense of rebellion; adolescent girls may find that smoking becomes a powerful way to indicate their dissatisfaction with school and their social reality (Krohn et al., 1986). Researchers have suggested that girls are distinct and that their perceptions of their social identity, their academic abilities and their school may all become relevant when making choices about initiating and maintaining tobacco use.

Flay, Hu and Richardson (1998) found that school grades significantly predicted both experimental and regular smoking patterns, but especially for the female students. Their focus was on the etiology of cigarette use to help identify possible predictors. They measured students during grade 7 and again in grade 12 and confirmed that "those who did not do well in school were more likely to smoke" (p.12). As a consequence to a decline in school performance, some youth potentially even increase their smoking behavior, and thus more research is required to understand this possible predictor (Orlando, Tucker, Ellickson & Klein, 2004).

To explore the relationship between self-competence, social support, gender and substance abuse, Lifrak, McKay, Rostain, Alterman and O'Brien (1997) administered surveys with students aged 12-15. One aspect of competence was defined as scholastic competence and the participants were divided into low and high classifications. For the girls with low scholastic competence, more perceived support from classmates was associated with more substance use, including tobacco use. The researchers suggested that these girls could be excluded from the peer groups containing the more academically successful students, which promoted an increased involvement with the other scholastically troubled students. The other, more deviant group may also be involved in additional behaviors, such as substance abuse. As well, for the girls with low scholastic competence, teacher and parent support were unrelated to substance use.

The research from two Canadian nurses has suggested there are particular factors that prompt female adolescents to choose to smoke (Dunn & Johnson, 2001). Their qualitative research study found that girls sampled cigarettes primarily due to curiosity and the influence of schoolmates. Their participants also spoke about the "change in

attitude toward smoking" that they believed happened when entering high school (p.292). Research participants expressed their surprise about friends who began smoking, even though the friends were aware of the associated health risks, and the offers made to them to join in the smoking behavior. It seems from this research that adolescent females may be required to make a health-related decision for themselves at a time in their life when the influence of the school environment is compelling.

Lloyd, Lucas and Fernbach (1997) found an increase in girls' smoking at the age of 14 years old, and therefore they decided to identify the possibility of a *girl smoker* social identity. Their qualitative study addressed the meanings and descriptors that the female students used for smoking and nonsmoking girls. One dimension that emerged during the focus group discussions was attitude to schoolwork. It was found that the adolescent female smokers described their attitude as both "nonchalant and minimalist", and the nonsmokers agreed with this description of their peers' attitude (p.53).

Another possible way that the school environment has influenced adolescent girls has been attributed to their perceptions of school (MacDonald & Wright, 2002). These Canadian researchers found that for their female secondary school participants, the girls perceived alienation from their school was related to the likelihood of smoking behavior. In addition, a dislike for the school administrators and the overall teaching climate was also more common with the females that were using tobacco. Indeed, "rather than a behavior which isolates or alienates, smoking tends to draw adolescent smokers together, to create social confluence" which is why smoking is so appealing to the girls that feel school alienation (O'Loughlin, Kishchuk, DiFranza, Tremblay & Paradis, 2002, p.204).

A qualitative study completed with 18-19 year olds from Manitoba discovered that "smoking became a vehicle for young women to belong to a group" (Seguire & Chalmers, 2000, p.1428). For example, the participants discussed how they had common interests with other girls, because of their smoking behavior, either in school or social circumstances. They could talk about smoking, share cigarettes, and have an activity to pass time, manage uncomfortable feelings and even meet new girls. They believed their smoking enhanced their image and made them seem mature to others. This research illustrated that smoking could be the anchor that some female students gravitate to when in school situations, and created norms that the girls followed in order to feel accepted.

For the school-aged girls using cigarettes, their affiliation with tobacco and with a specific smoker identity creates a powerful and usually long lasting connection. Some research indicated that especially for females, dependency upon nicotine is likely and can become a progressive habit (Blitstein, Robinson, Murray, Klesges & Zbikowski, 2003). In effect, the school environment may create a social arena that makes it easier to start smoking and even more difficult to attempt to quit (van Roosmalen & McDaniel, 1992).

Examinations of the relationship between tobacco use and school factors, including school connection, have shown there are implications for adolescent girls. Further investigations into aspects such as school attitude, grade average and time spent on schoolwork are necessary, due to the consequences of tobacco use. By describing these

elements as school connectedness, this study will focus on adolescent females' self-reported tobacco use, and proposes that there will be associations between these features. As a result, uncovering any links between these issues can assist both counsellors and educators to promote the health of adolescent females.

## Method

### *Participants*

The students that completed the *Student Health Survey* (SHS) were from rural communities close to Edmonton, Alberta. In total, 512 youth from grades 9-12 participated in the questionnaire, which resulted in 274 female respondents. The females ranged in aged from 14-18 years and comprised 54% of the sample size.

For the purpose of this research, only the data from the adolescent females that responded to the questions about their tobacco use were included (n=274). The first question for this study required responses from only the current smokers and the nonsmokers (n=229). Therefore, the females that agreed they had ceased using tobacco were excluded (n=45). The average age of the female students was 17 years old. Overall, data from 84% of the female participants of the SHS were used for this research question.

### *Instrument*

The SHS was a multiple choice and short answer questionnaire. Students that chose to participate responded to inquiries about their personal history, circumstances at school, and their health and sexual behaviors. The design of the SHS was influenced by the knowledge and experience, in both education and counselling, of Gretchen Hess, PhD (personal communication).

It was determined that isolating the events of the girls was important, in order to understand their experiences with smoking. Since studies suggest that a greater number of girls are using tobacco (AADAC, 2003), the separation of genders is of value for more in-depth information in this phenomenon where girls outnumber boys.

Since the goal of this current research is to understand if there is a relationship between adolescent girl's use of tobacco and connection to school, only the following questions from the SHS were used:
(See Appendix: Part 1- Background Information, Number 14, 19, 20, 23, 24).

I. The question to measure use of tobacco was:

**Which statement best describes your use of tobacco?**

1. I never have used any tobacco products
2. I have rarely smoked or chewed tobacco

3. I am an occasional smoker (or chewer) of tobacco
4. I used to use tobacco products, but have quit
5. I smoke (or chew) tobacco regularly

II. The four items used to represent school connectedness were:

**Do you like school?**

1. I love school
2. I like school more than most of my friends
3. Its OK (average)
4. I don't like school very much
5. I hate school
6. Other_____(write in)

**What is your approximate grade average in school?**

1. Less than 40%
2. 40-50%
3. 50-65%
4. 65-80%
5. 80-100%

**How much time, on average, do you spend doing homework each week?**

1. None
2. Less than one hour
3. 1-2 hours
4. 3-5 hours
5. more than 5 hours

**How much time, on average, do you spend studying each week?**

1. None
2. Less than one hour
3. 1-2 hours
4. 3-5 hours
5. more than 5 hours

***Ethics Approval and Procedures***

After the school provided consent for the research project, informed consent was then provided by the students' parents or guardians. The students who agreed to be involved in the initial SHS study were told about the purpose of the questionnaire and that their participation for this research was voluntary. All participants were assured about

confidentiality for the SHS and were allowed to withdraw if any concerns arose for them. In addition, the questionnaires were contained within sealed envelopes and no identifying names were used, to ensure the privacy and anonymity of students' responses. As well, the participants completed the study at the same time so that they could not discuss or influence their respective responses. Supervision of the study materials was provided by Hess and school personnel.

The results from the original SHS yielded data from 274 female adolescents. In 2003, the University of Alberta Faculties of Education and Extension Research Ethics Board (REB) provided permission to use this previously collected data to further understand female students' attitudes and behaviors about health-related behaviors.

***Data Analysis***

For this current study, the answers that pertained to the adolescent females' tobacco consumption was the focus, in order to determine whether there is an association between their current tobacco use and their sense of school connectedness. To determine their use of tobacco, the initial survey required the respondents to consider five possible categories and to rate their subjective level of tobacco use.

To complete this plan of research, the decision was made to use only four of the categories and to create a continuum of tobacco use. Thus, the participant responses indicating they had ceased using tobacco were omitted. The female adolescents who agreed they were either nonsmokers, rare, occasional or regular smokers became the focus. Akerstream (1997) also used four smoking categories, and defined these as never-tried, tried smokers, current-occasional and current-daily smokers. Flay, Hu and Richardson (1998) also classified their participants into four stages including never users, triers, experimenters and regular users. Jackson, Henriksen, Dickinson, Messer and Bridges Robinson (1998) placed their students into abstainer, starter, trier and smoker sections. Therefore, the re-organization of the smoking data from the SHS created a valid ordinal scale to allow for statistical analysis.

This decision to delete the data from the former smokers was due, in part because research has suggested that not all youth that use cigarettes will become committed smokers (Kessler, 1995). Therefore, the decision to eliminate the quitters (n=45) from this research may reflect these particular individuals who are not current smokers, due to their lack of commitment to this choice. In addition, researchers have not been consistent with their definitions of smokers and have used terms arbitrarily (White, Pandina & Chen, 2002). Consequently, it was decided to be as specific as possible when categorizing the participants of this research.

In the SHS, the adolescent females were asked about their use of tobacco and their answers ranged from none to regular use. The respondents that chose to define themselves as either rare, occasional or regular smoker were assumed to be the current smokers and for this study, the responses of the girls that believed they had quit smoking

were considered as disparate. Therefore, for this research, only the adolescent females that agreed they were current smokers and nonsmokers were included.

These categories were then analyzed with other variables to understand the relationship between tobacco consumption and school connectedness. For this research question, it was determined that attitude toward school, as well as time spent studying each week and doing homework each week, and approximated grades could qualify as indicators of school connectedness.

With regards to the variables that comprised school connectedness, some adjustments were completed to allow for statistical analysis. For the survey question about *attitude toward school*, which was phrased as "Do you like school?" there were seven participant responses that were not included. Five responses listed as "other" were deleted because these contained qualitative information that could not be categorized. Also, two participants did not answer the question, thus the data was modified (n=222) and therefore did not have the anticipated number (n=229) of participants.

To allow for statistical analysis, the following data transformation occurred. It was determined that only three categories were required, instead of the original six categories. Originally, the responses for the SHS resembled: 1) I love school; 2) I like school; 3) It's ok; 4) I don't like school; 5) I hate school; 6) other (requiring short answer). The last category was deleted, due to the requirements for statistical analysis. Next, it was decided to recode the first two responses into one category, in addition to arranging the fourth and fifth responses into one category. The categories were collapsed because of the low number of cases that were found when the remaining five categories were separated. Therefore, the new ordinal scale resulted in three attitudes that were classified to represent "like", "average" and "dislike" school. This simple scale was thought to be reflective of the original purpose of the SHS to understand the adolescents' attitude toward school.

For this study, the variable that described the adolescent female's *approximate grade average* was also transformed. Since one participant declined to answer the question, there were 228 responses. Original responses about grades were: 1) less than 40%; 2) 40-50%; 3) 50-65%; 4) 65-80%; 5) 80-100%. None of the participants estimated that their marks were any less than 40%, therefore the first response was never chosen. The second response was chosen by only three participants. Therefore, the categories were recoded due to the low number of cases in the original five categories. The creation of three categories was believed to reflect a range of approximated grades and to be aligned with the original intent of this SHS question. The responses were sorted into sets of: 1) $\leq 65\%$; 2) 65-80%; and 3) $\geq 80\%$. It was determined that this ordinal scale would allow for statistical analysis.

For the set of questions to measure average *homework time* each week, on the SHS participants were given five choices. The options to choose were: 1) none; 2) less than one hour; 3) 1-2 hours; 4) 3-5 hours; 5) more than 5 hours. All possible participants responded (n=229), however, only five participants chose the first option. Therefore,

again due to the small number of cases in the statistical analysis, the categories were combined and recoded. It was only necessary to combine the first three responses. The items to describe time spent on homework became: 1) ≤ 2 hours; 2) 3-5 hours; and 3) > 5 hours.

Finally, it was also decided to reorganize the set of SHS questions inquiring about the average *study time* each week for the adolescent. The same arrangement of five choices was provided; one student declined to provide her answer (n=228). Participants selected from the following: 1) none; 2) less than one hour; 3) 1-2 hours; 4) 3-5 hours; 5) more than 5 hours. All possible categories were chosen, yet the last category had only three respondents, so it was combined with the penultimate option. The revised arrangement had four categories: 1) none; 2) < 1 hour; 3) 1-2 hours; and 4) ≥ 3 hours.

## Results

Since the data has been reorganized into categories that have an ordinal format, it is possible to address the relationship between tobacco use and school connectedness. Therefore, statistical analysis was performed by using SPSS. The chi-square test of association was applied to fulfill the plan of this research study.

A summary of the results are as follows: from the first variable representing school connectedness, *attitude toward school*, the data does suggest that there is a significant association between tobacco use and adolescent females' beliefs about school, with chi square value at 22.69, significant at the .01 level ($\chi^2$=22.7, p≤.01,df=6).

The results from the second variable representing school connectedness, *approximate grade average*, suggest that there is a significant association between tobacco use and adolescent females' estimates for grades, with chi square value at 25.54, significant at the .001 level .($\chi^2$=25.5, p≤.001,df=6).

The results from the third variable representing school connectedness, *weekly average time spent on homework*, suggest that there is a significant association between tobacco use and time that adolescent females spend on homework, with chi square value at 12.63, significant at the .05 level ($\chi^2$=12.6, p≤.05,df=6).

The results from the fourth variable representing school connectedness, *weekly average time spent on studying*, does not suggest there is a relationship with tobacco use. There is no significant result for the chi square statistic, and therefore self-reported levels of tobacco use is not associated with time spent on studying, within this sample.

With regards to school connectedness, three out of the four variables chosen to operationalize this construct were statistically significant. Within this sample, this study found that adolescent females' self-reported levels of tobacco use has an association with attitude toward school, approximate grade average and average homework time.

Following the hypothesis for this research study, it appears that the adolescent females who reported they had higher rates of tobacco use could experience school connectedness differently that the other female participants. In this study, the adolescent female regular smokers tended to dislike school, estimate lower grades and spend less time on homework. These results validate the literature review that there is an association between tobacco use and adolescents females' school attitude, approximate grades and average homework time each week, which has been chosen to represent their experience of school connectedness. However, average time spent on studying does not seem to be impacted by tobacco use for the adolescent females in this research study.

The following tables show the relationship between adolescent females' self-reported rates of tobacco use and each of the variables chosen to represent school connectedness.

| TABLE 2-1 | | | Adolescent Females' Reported Attitude Toward School | | | |
|---|---|---|---|---|---|---|
| | | | 2=Like | 3=OK (Average) | 4=Dislike | Total |
| **Smoking Rate of Females Based on Self - Reports of Tobacco Use** | Regular Smoker | Count | 7 | 45 | 20 | 72 |
| | Occasional Smoker | Count | 5 | 25 | 4 | 34 |
| | Rare Smoker | Count | 10 | 30 | 4 | 44 |
| | Nonsmoker | Count | 25 | 40 | 7 | 72 |
| TOTAL | | | 47 | 140 | 35 | 222 |

**Chi-Square Tests**

| | Value | Df | Asymp. Sig. (2-sided) |
|---|---|---|---|
| Pearson Chi-Square | 22.691(a) | 6 | .001 |
| N of Valid Cases | 222 | | |

The results from the first variable representing school connectedness, *attitude toward school*, suggest that there is a significant relationship between tobacco use and adolescent females' beliefs about school. Within this sample, self reported levels of tobacco use have an association with attitude toward school, with a chi square value at 22.69, significant at the .01 level (df=6).

| TABLE 2-2 | | | Adolescent Females' Approximate Grade Average | | | Total |
|---|---|---|---|---|---|---|
| | | | ≤65% | 65-80% | ≥80% | |
| **Smoking Rate of Females Based on Self - Reports of Tobacco Use** | Regular Smoker | Count | 31 | 39 | 3 | 73 |
| | Occasional Smoker | Count | 4 | 22 | 8 | 34 |
| | Rare Smoker | Count | 7 | 25 | 12 | 44 |
| | Nonsmoker | Count | 15 | 47 | 15 | 77 |
| TOTAL | | | 57 | 133 | 38 | 228 |

**Chi-Square Tests**

| | Value | Df | Asymp. Sig. (2-sided) |
|---|---|---|---|
| Pearson Chi-Square | 25.538(a) | 6 | .000 |
| N of Valid Cases | 228 | | |

The results from the second variable representing school connectedness, *approximate grade average,* suggest that there is a significant relationship between tobacco use and adolescent females' estimates for grades. Within this sample, self reported levels of tobacco use have an association with approximate grade average, with a chi square value at 25.54, significant at the .001 level (df=6).

| TABLE 2-3 | | | Adolescent Females' Average Homework Time Per Week | | | |
|---|---|---|---|---|---|---|
| | | | ≤2 hours | 3-5 hours | >5 hours | Total |
| **Smoking Rate of Females Based on Self - Reports of Tobacco Use** | Regular Smoker | Count | 44 | 23 | 7 | 74 |
| | Occasional Smoker | Count | 25 | 6 | 3 | 34 |
| | Rare Smoker | Count | 20 | 14 | 10 | 44 |
| | Nonsmoker | Count | 34 | 30 | 13 | 77 |
| TOTAL | | | 123 | 73 | 33 | **229** |

**Chi-Square Tests**

| | Value | Df | Asymp. Sig. (2-sided) |
|---|---|---|---|
| Pearson Chi-Square | 12.629(a) | 6 | .049 |
| N of Valid Cases | 229 | | |

The results from the third variable representing school connectedness, *weekly average time spent on homework* , suggest that there is a significant relationship between tobacco use and time that adolescent females spent on homework. Within this sample, self reported levels of tobacco use have an association with attitude toward school, with a chi square value at 12.63, significant at the .05 level (df=6).

| TABLE 2-4 | | | Adolescent Females' Average Study Time Per Week | | | | Total |
|---|---|---|---|---|---|---|---|
| | | | None | <1 hourr | 1-2 hours | ≥3 hours | |
| **Smoking Rate of Females Based on Self - Reports of Tobacco Use** | Regular Smokers | Count | 5 | 30 | 33 | 5 | 73 |
| | Occasional Smokers | Count | 4 | 13 | 15 | 2 | 34 |
| | Rare Smokers | Count | 5 | 14 | 18 | 7 | 44 |
| | Nonsmokers | Count | 6 | 24 | 32 | 15 | 77 |
| TOTAL | | | 20 | 81 | 98 | 29 | 228 |

**Chi-Square Tests**

| | Value | df | Asymp. Sig. (2-sided) |
|---|---|---|---|
| Pearson Chi-Square | 8.886(a) | 9 | .448 |
| N of Valid Cases | 228 | | |

The results from the fourth variable representing school connectedness, *weekly average time spent on studying,* does not suggest there is a relationship with tobacco use. There is no significant result for the chi square statistic, and therefore self-reported levels of tobacco use does not have an association with time spent on studying, within this sample.

TABLE 2-5: Attitude Toward School Chart

| ADOLESCENT FEMALES | Regular Smokers | Occasional Smokers | Rare Smokers | Nonsmokers |
|---|---|---|---|---|
| Like school | LESS than Expected; 7/72 | LESS than Expected; 5/34 | MORE than Expected; 10/44 | MORE than Expected; 25/72 |
| School is ok | Expected; 45/72 | MORE than Expected; 25/34 | MORE than Expected; 30/44 | LESS than Expected; 40/72 |
| Dislike school | MORE than Expected; 20/72 | LESS than Expected; 4/34 | LESS than Expected; 4/44 | LESS than Expected; 7/72 |

This study found that for the regular smoking females, more than was expected reported they disliked school (Table 2-5). Indeed, 90% of the adolescents that are regular smokers tend to have the attitude that school is average or they dislike school. For the females that reported occasional tobacco use, the majority (74%) has the attitude that school is ok/average. For the females who believe they are rare smokers, more than was expected either liked school or felt school was average (91%). As for the nonsmoking adolescents, most of these females (91%) reported they either liked school or school was average. In comparison, 28% of the regular female smokers disliked school. Therefore, the pattern for this data suggests that as adolescent females report higher rates of tobacco use, they tend to dislike school more. In order to depict the significant results of this study in a visual format, only the data from females that either liked or disliked school were outlined (Figure 2-1).

**Figure 2-1**
**Adolescent Females' Attitude Toward School**

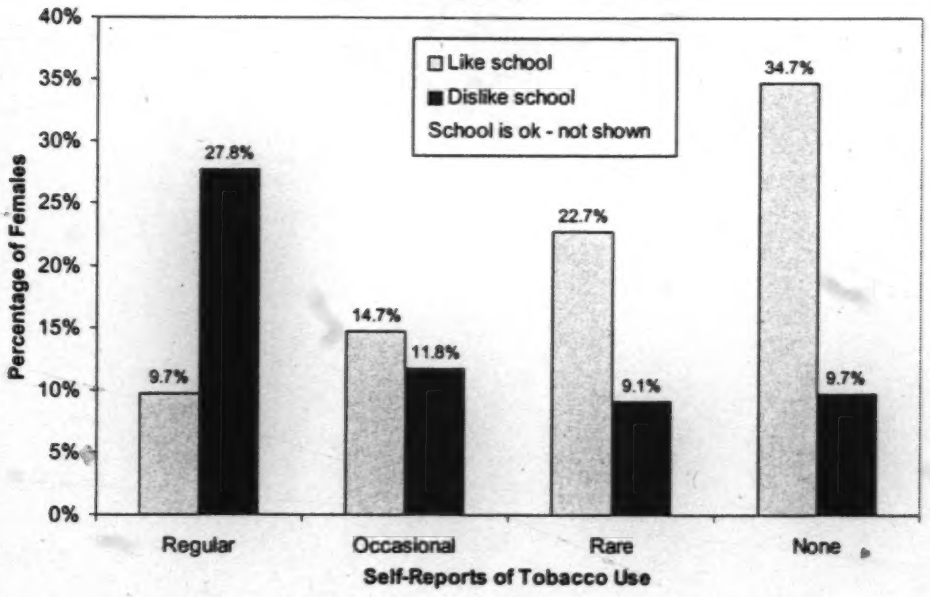


TABLE 2-6 : Approximate Grade Average Chart

| ADOLESCENT FEMALES | Regular Smokers | Occasional Smokers | Rare Smokers | Nonsmokers |
|---|---|---|---|---|
| Grades ≤65% | MORE than Expected; 31/73 | LESS than Expected; 4/34 | LESS than Expected; 7/44 | LESS than Expected; 15/77 |
| Grades 65–80% | LESS than Expected; 39/73 | MORE than Expected; 22/34 | Expected; 25/44 | MORE than Expected; 47/77 |
| Grades ≥80% | LESS than Expected; 3/73 | MORE than Expected; 8/34 | MORE than Expected; 12/44 | MORE than Expected; 15/77 |

Research results propose that for the regularly smoking adolescents, more than expected (42%) estimated their grades to be 65% or lower (Table 2-6). For the females that were occasionally using tobacco, the vast majority (88%) were achieving grades of over 65%. Also, the data showed that less than expected reported themselves at the lower end of grades. With the females that agreed to rare use, the majority (84%) were estimating grades of over 65%. The results showed that the nonsmoking females had less than expected at the lower end of grade average; the majority believed they had grades over 65%. Indeed, more than expected (19%) were achieving grades at the top level of ≥80%. Thus, the pattern demonstrates that the females that are regular tobacco users tend to estimate lower grades for themselves, in comparison to the occasional, rare and nonsmoking adolescents. In order to depict the significant results of this study in a visual format, only two categories of the adolescent females' grades are presented (Figure 2-2).

**Figure 2-2**
**Adolescent Females' Approximate Grade Average**

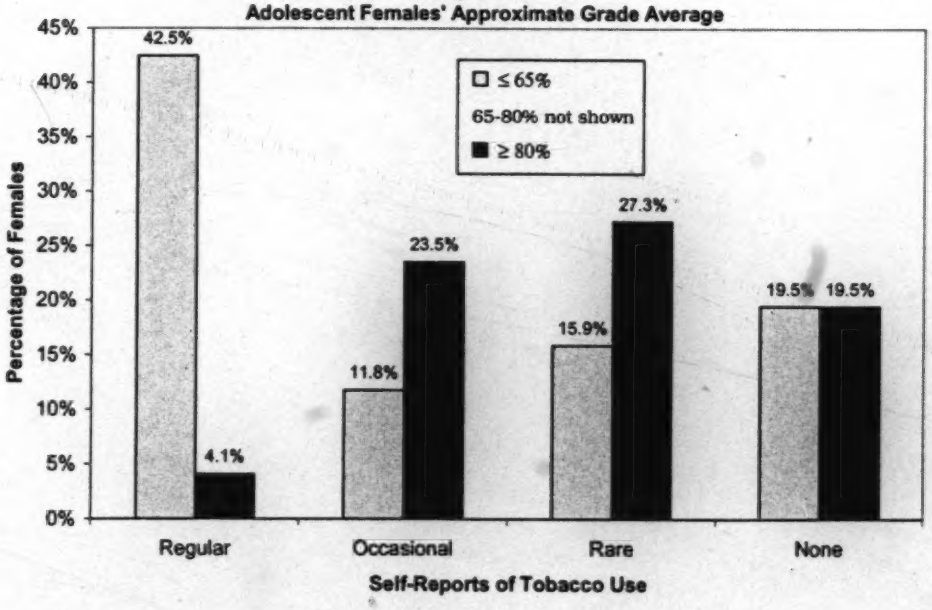
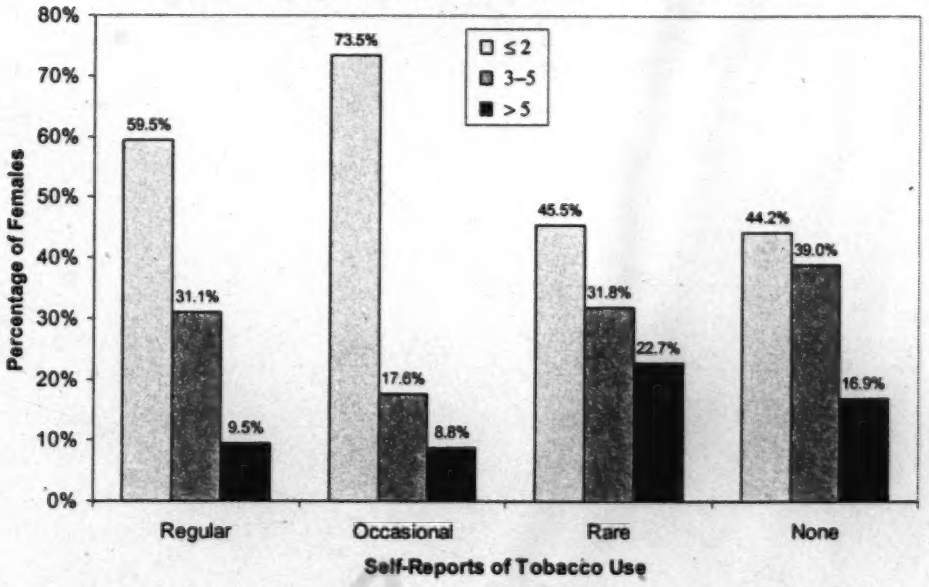


TABLE 2-7: Average Homework Time Per Week

| ADOLESCENT FEMALES | Regular Smokers | Occasional Smokers | Rare Smokers | Nonsmokers |
|---|---|---|---|---|
| Homework ≤ 2 hours per week | MORE than Expected; 44/74 | MORE than Expected; 25/34 | LESS than Expected; 20/44 | LESS than Expected; 34/77 |
| Homework 3-5 hours per week | Expected; 23/74 | LESS than Expected; 6/34 | Expected; 14/44 | MORE than Expected; 30/77 |
| Homework >5 hours per week | LESS than Expected; 7/74 | LESS than Expected; 3/34 | MORE than Expected; 10/44 | MORE than Expected; 13/77 |

The data showed that for the regular smoking females, more than expected (almost 60%) were spending ≤ 2 hours /week on homework (Table 2-7). For the females that were occasionally smoking, more than expected (74%) were doing homework ≤ 2 hours/week. As well, fewer than expected (26%) reported doing homework >3 hours/week. The rare smokers had less than expected completing ≤ 2 hours of homework, with the majority of females (55%) agreeing to >3 hours/week of homework. Nonsmoking adolescents also followed the same arrangement, since less than expected contributed ≤ 2 hours/week on homework. The majority (56%) responded that they spent >3 hours for homework time. In sum, 60% of the adolescent regular tobacco users were spending ≤ 2 hours/week on homework, and almost 74% of the occasional users completed ≤ 2 hours of homework. Thus, the pattern does suggest that as the females are reporting more tobacco use, they are also reporting less time spent on homework (Figure 2-3).

**Figure 2-3**
**Adolescent Females' Average Homework Time Per Week (Hours)**



## Discussion

Many studies have addressed tobacco use and school factors, in order to understand the associations that exist. This current study attempted to support the research that identifies adolescent females' experience of school connectedness. The statistical results demonstrate that future investigations should continue to explore this area of research. For adolescent girls, the implications of tobacco use are not only health related, but can be detrimental scholastically.

The outcome of this study suggests that adolescent females who are reporting regular use of tobacco are different than the comparison groups. Their sense of school connectedness is impacted by their dislike of school and reduced academic success. Further research could focus on understanding how this level of tobacco use interacts with school factors. For example, school personnel know that students consume cigarettes at school, with or without friends, and even skip school to further engage in this behavior (Bryant & Zimmerman, 2002). It is possible that for girls, the social aspect of tobacco use becomes more interesting than school studies, especially for the students that struggle academically. Perhaps these girls find that tobacco use becomes a way to express their unhappiness with school, both at the behavioral and interpersonal level. They can vent their frustration with other smokers, in a manner that demonstrates to their teachers and peers that they are more interested in substances than school. "Smoking cigarettes may be used as a symbol of toughness, maturity or independence by low grade achievers in an attempt to enhance their self-image" (Hover & Gaffney, 1988, p.144). The end result is perhaps that the adolescent smokers experience problems, such as academic difficulties, that reinforce their use of tobacco (Ellickson, Tucker & Klein, 2001).

Research has demonstrated that school connectedness is a protective factor when addressing adolescent substance use (AADAC, 2003). It seems logical that concerns about scholastic ability and achievement, as well as general unhappiness at school, would be a stressor for teens. Or, it may be argued that these teens are not as worried about themselves or their future, and therefore they are not concerned about health-risk behavior and its impact, now or in the future. School becomes a place to meet with peers and to engage in tobacco use, and the education goals are neglected. Indeed, the "lack of school connectedness may represent a precursor for increased tolerance for deviance, alienation from all but a circumscribed group of peers, and subsequent substance use" (Lloyd-Richardson, et al., 2002, p.1006). This idea lends support to Problem Behavior Theory, which has found that adolescent cigarette smoking is closely tied to other problem behaviors, such as drug and alcohol use (Turbin, Jessor & Costa, 2000).

The similarities between the adolescent girls that report they are rare tobacco users, and the nonsmokers, needs to be explored. Even at low levels of smoking rates, these girls are reporting that they do like school and that they are working at their studies and experiencing success. This could indicate that these adolescents are using tobacco for different reasons than the occasional and regular smokers. Indeed, Wang et al., (1999) suggests that social-psychological factors, such as school behavior, are able to predict the development of adolescent smoking use from nonsmoking to either experimental or

regular smoking. By continuing to focus on school, and experiencing a sense of connection, perhaps these rare smokers represent resiliency. It is possible that these teens have a sense of control over their current circumstances, in a realm that is central to this phase of their lives. When experiencing school connection, these adolescent females can develop coping strategies, such as spending time on homework, to deal with the demands of school life. One aspect of resiliency research advocates that "success in one arena gives people positive feelings of self-esteem and self-efficacy that make it more likely that they will have the confidence to take active steps to deal with life challenges" (Rutter, 1993, p.629). When female nonsmokers are able to withstand the pressure to smoke, and the rare smokers are able to limit their tobacco intake, such actions could be related to their positive attitude about school and plans for their future.

Based on the results of this study, the group of rare smokers could be school-based targets for prevention, to ensure that these adolescent females do not increase their tobacco use. They are at statistically at risk, since research shows that tobacco use tends to increase as students age and advance in grades (Perry & Staufacker, 1996). Management of smoking behavior is quite successful to lessen the chances of cigarette use in adulthood, since it is the daily routine of tobacco use that is related to progression (Snow & Bruce, 2003). Teaching these adolescents additional problem solving skills, enhancing self-care activities and promoting intrapersonal strengths may interact with their sense of school connectedness.

For the adolescents that are occasional and regular users of tobacco, school intervention programs could re-evaluate their traditional achievement based reward systems. It has been suggested that for adolescent girls, "cigarette smoking may be viewed as a method of coping with anxiety, frustration or psychological distress induced by lack of academic success" (Siener, Malarcher & Husten, 2000, p.78). Schools could consider other rewards and encouragement for students, such as attendance in class, commitment to projects and accessing supports. Using short-term goals may assist the adolescents that are dissatisfied, especially if they are reinforced by peers that are accomplishing similar goals (Krohn et al., 1986). The team aspect helps, since research confirms that current and experimental smokers, more than nonsmokers, "place a higher value on friendship and group membership" (Snow & Bruce, 2003, p.447).

Creating strategies to increase school connectedness is vital with the occasional and regular smokers, since they are the group that will probably continue tobacco use into adulthood. Any interventions need to developed based on gender, since research suggests that there are gender differences, especially with rapid escalation of tobacco use (Blitstein et al., 2003; Koval, Pederson & Chan, 2004). These responses are recommended, as it is imperative that the intervention programs do not leave adolescent girls out of all the progress that has been made in treating substance abuse (Blake, Amaro, Schwartz & Flinchbaugh, 2001).

***Limitations and Future Studies***

A number of limitations should be considered for this study. The SHS was completed by students in their classrooms, and therefore it was not possible to connect with the adolescent females who were absent from school. Those absent may represent the girls who are skipping school or those that have actually dropped out. Snow and Bruce (2003) remind researchers that classroom focused results are likely to underestimate the smoking prevalence of adolescents, since tobacco users are at risk for not attending school. Gathering data from youth at alternative schools, which cater to the at-risk population, may assist to expand the number of participants. As well, the designs should try and incorporate more than only two measurement periods, and if possible include multiple waves of data (Mayhew, Flay & Mott, 2000).

Another concern is that the results are based on self-reports from the adolescents. Certainly confidentiality was assured, however their answers required honest responses about a health-risk behavior. Tobacco use is an illegal and undesirable behavior for adolescents, thus underreporting is possible. As well, some students who choose to smoke as a way to express an image, may over report their frequency of use. There was no ability to validate the responses against actual behavior, which some studies accomplish by using carbon monoxide samples (Beal, Ausiello & Perrin, 2001). As well, the SHS measures, which required subjective conclusions about rates of use, could lead to the underestimation of smoking behavior. Indeed, adolescents change their definitions of consumption, depending on when the questions are posed, and by whom (Engels, Knibbe & Drop, 1997). To continue using ordinal measures, future studies could be more objective by presenting specific options for frequency or quantity of tobacco use (Stacy, Flay, Sussman, Brown, Santi & Best, 1990).

Since the data for this study was previously collected, it was not possible to gather other information to assist in explaining the results. Thus, the research question was limited to four elements to represent school connectedness. As well, data from other sources about school connectedness was unavailable. If this topic is reviewed in the future, observations from the female adolescents' teachers and school counsellors about the school climate and outlook on tobacco use would be informative. This next step would help to contextualize the environment and provide necessary ideas to explain the impact of the school itself. Perhaps questions could be added to the female participants' survey to inquire about additional measures of school connectedness, such as adjustment to school, attitude toward the teachers, the importance of schoolwork and their outlook on their beliefs about their best friend/peers attitude toward school. Also, questions about their interpretation of the school's policy toward tobacco use could be beneficial. For example: where do the students smoke? How are smokers monitored? How accessible are both cigarettes and the smoking area? As well, what are the responses of teachers about tobacco use?

Finally, the generalizability of this study is limited, since the data was collected in the past and outside of an urban area. However, this exploration of the association between tobacco use and school connectedness, specific to adolescent females, presents

compelling potential for additional studies. With more understanding of the experiences of teenage girls using tobacco, programs for counselling can be developed. For example, school personnel and addiction agencies can use this information to enhance their risk assessment tools for their adolescent clients (Faucher, 2002).

Despite these limitations, the findings of this study can inform the prevention and intervention efforts for assisting adolescent girls to overcome the lure of tobacco. Indeed, if regular use of tobacco is inversely associated with school connectedness, then are school based intervention efforts truly reaching these adolescent females? Young women most at risk to use cigarettes can be those least likely to relate to the school environment (Stead, Hastings & Tudor-Smith, 1996). Therefore, when prevention efforts are promoted within the classroom, young women who are disconnected from school may overlook these presentations about risks of smoking and strategies to cope. Researching and evaluating the role of tobacco use for school connectedness is a priority for adolescent females. Early identification of adolescent girls who are struggling in school and initiating tobacco use can only benefit the professionals in their intervention efforts, as well as support these youth for the successful navigation of their physical and academic health.

## References

Alberta Alcohol and Drug Abuse Commission (AADAC), (2003). *The Alberta youth experience survey 2002: Summary report*. Edmonton, Alberta.

Alberta Alcohol and Drug Abuse Commission (AADAC), (2004). *Tobacco basics handbook: 2004 edition*. Edmonton, Alberta.

Akerstream, J. (1997). *Investigating smoking behavior and beliefs about smoking among Manitoba students aged 9-18 years*. (Master's thesis), University of Manitoba, Canada.

Beal, A., Ausiello, J., & Perrin, J. (2001). Social influences on health-risk behaviors among minority middle school students. *Journal of Adolescent Health, 28*, 474-480.

Blake, S., Amaro, H., Schwartz, P., & Flinchbaugh, L. (2001). A review of substance abuse prevention interventions for young adolescent girls. *Journal of Early Adolescence, 21*, 294-324.

Blitstein, J., Robinson, L., Murray, D., Klesges, R., & Zbikowski, S. (2003). Rapid progression to cigarette smoking among nonsmoking adolescents: Interactions with gender and ethnicity. *Preventive Medicine, 36*, 455-463.

Bryant, A. & Zimmerman, M. (2002). Examining the effects of academic beliefs and behaviors on changes in substance use among urban adolescents. *Journal of Educational Psychology, 94(3)*, 621-637.

Carvajal, S., Wiatrek, D., Evans, R., Knee, C., & Nash, S. (2000). Psychosocial determinants of the onset and escalation of smoking: Cross-sectional and prospective findings in multiethnic middle school samples. *Journal of Adolescent Health, 27*, 255-265.

CASA (2003). The formative years: pathways to substance abuse among girls and young women ages 8 to 22. *National Centre on Addiction and Substance Abuse: Columbia University*. Retrieved September 21, 2004, from www.casacolumbia.org.

Choi, W., Pierce, J., Gilpin, E., Farkas, A., & Berry, C. (1997). Which adolescent experimenters progress to established smoking in the United States. *American Journal of Preventive Medicine, 13(5)*, 385-391.

Clayton, S. (1991). Gender differences in psychosocial determinants of adolescent smoking. *Journal of School Health, 61*, 115-120.

Dierker, L., Avenevoli, S., Goldberg, A., & Glantz, M. (2004). Defining subgroups of adolescents at risk for experimental and regular smoking. *Prevention Science, 5(3),* 169-183.

Donovan, J (1996). Probem-behavior theory and the explanation of adolescent marijuana use. *Journal of Drug Issues, 26(2),* 379-400.

Dunn, D., & Johnson, J. (2001). Choosing to remain smoke-free: The experiences of adolescent girls. *Journal of Adolescent Health, 29*, 289-297.

Ellickson, P., Tucker, J., & Klein, D. (2001). High-risk behaviors associated with early smoking: Results from a 5 year follow up. *Journal of Adolescent Health, 28*, 465-473.

Engels, R., Knibbe, R., & Drop, M. (1997). Inconsistencies in adolescents' self-reports of initiation of alcohol and tobacco use. *Addictive Behaviors, 22(5),* 613-623.

Faucher, M. (2002). *Why do girls smoke.* (Dissertation), Texas Woman's University, USA.

Flay, B., Hu, F. & Richardson, J. (1998). Psychosocial predictors of different stages of cigarette smoking among high school students. *Preventive Medicine, 27*, A9-A18.

French, S., & Perry, C. (1996). Smoking among adolescent girls: Prevalence and etiology. *Journal of the American Medical Women's Association, 51*, 25-28.

Greaves, L. (1996). *Smoke screen: Women's smoking and social control.* Halifax: Fernwood Publishing.

Gritz, E. (1984). Cigarette smoking by adolescent females: Implications for health and behavior, *Women's Health, 9,* 103-115.

Health Canada (2001). Smoking in Canada: An overview. *Canadian Tobacco Use Monitoring Survey.* Retrieved September 20, 2004, from www.hc-sc.gc.ca/hecs-sesc/tobacco/research/ctums/2001/2001overview.html.

Health Canada (2005). Legislation, regulation and compliance. *Research.* Retrieved February 27, 2005, from www.hc-sc.gc.ca/hecs-sesc/tobacco/legislation/index.html.

Hover, S. & Gaffney, L. (1988). Factors associated with smoking behavior in adolescent girls. *Addictive Behaviors, 13*, 139-145.

Hu, T., Lin, Z. & Keeler, T. (1998). Teenage smoking, attempts to quit and school performance. *American Journal of Public Health, 88(6)*, 940-943.

Jackson, C. (1997). Intitial and experimental stages of tobacco and alcohol use during late childhood: Relation to peer, parent and personal risk factors. *Addictive Behaviors, 22(5)*, 685-698.

Jackson, C., Henriksen, L., Dickinson, D., Messer, L. & Bridges Robertson, S. (1998). A longitudinal study predicting patterns of cigarette smoking in late childhood. *Health Education and Behavior, 25*, 436-447.

Jessor, R. (1987). Problem-behavior theory, psychosocial development and adolescent problem drinking. *British Journal of Addiction, 82*, 331-342.

Jessor, R., Van Den Bos, J., Vanderryn, J., Costa, F., & Turbin, M. (1995). Protective factors in adolescent problem behavior: Moderator effects and developmental change. *Developmental Psychology, 31(6)*, 923-933.

Kandel, D., Yamaguchi, K., & Chen, K. (1992). Stages of progression in drug involvement from adolescence to adulthood: Further evidence for the gateway theory. *Journal of Studies on Alcohol, 53*, 447-457.

Kessler, D. (1995). Sounding board: Nicotine addiction in young people. *New England Journal of Medicine, 333*, 186-189.

Krohn, M., Naughton, M., Skinner, W., Becker, S., & Laurer, R. (1986). Social disaffection, friendship patterns and adolescent cigarette use: The muscatine study. *Journal of School Health, 56(4)*, 146-150.

Koval, J., Pederson, L., & Chan, S. (2004). Psychosocial variables in a cohort of students in grades 8 and 11: A comparison of current and never smokers. *Preventive Medicine, 39*, 1017-1025.

Lifrak, P., McKay, J., Rostain, A., Alterman, A., & O'Brien, C. (1997). Relationship of perceived competencies, perceived social support, and gender to substance use in young adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry, 36(7)*, 933-940.

Lloyd, B., Lucas, K. & Fernbach, M. (1997). Adolescent girls' constructions of smoking identities: Implications for health promotion. *Journal of Adolescence, 20*, 43-56.

Lloyd-Richardson, E., Papandonatos, G., Kazura, A., Stanton, C., & Niaura, R. (2002). Differentiating stages of smoking intensity among adolescents: Stage-specific psychological and social influences. *Journal of Consulting and Clinical Psychology, 70(4)*, 998-1009.

Lothian, S. (2002). *Understanding adolescent smoking behavior: An ecological approach.* (Dissertation), University of Western Ontario, Canada.

MacDonald, M., & Wright, N. (2002). Cigarette smoking and the disenfranchisement of adolescent girls: A discourse of resistance. *Health Care for Women International, 23,* 281-305.

Maes, L., & Lievens, J. (2001). Can the school make a difference? A multilevel analysis of adolescent risk and health behavior. *Social Science and Medicine, 56,* 517-529.

Mayhew, K., Flay, B., & Mott, J. (2000). Stages in the development of adolescent smoking. *Drug and Alcohol Dependence, 59,* S61-S81.

Mettlin, C. (1976). Peer and other influences on smoking behavior. *Journal of School Health, 46(9),* 529-536.

Michell, L. & Amos, A. (1997). Girls, pecking order and smoking. *Social Science & Medicine, 44(12),* 1861-1869.

Novak, S. & Clayton, R. (2001). The influence of school environment and self-regulation on transitions between stages of cigarette smoking: A multilevel analysis. *Health Psychology, 20(3),* 196-207.

O'Loughlin, J., Kishchuk, N., DiFranza, J., Tremblay, M., & Paradis, G. (2002). The hardest thing is the habit: A qualitative investigation of adolescent smokers' experience of nicotine addiction. *Nicotine and Tobacco Research, 4,* 201-205.

Orlando, M., Tucker, J., Ellickson, P., & Klein, D. (2004). Developmental trajectories of cigarette smoking and their correlates from early adolescence to young adulthood. *Journal of Consulting and Clinical Psychology, 72,* 400-410.

Perry C. & Staufacker M. (1996). Tobacco use. From DiClement, Hansen & Ponton (Eds.), *Handbook of Adolescent Risk Behavior* (53-81), New York: Plenum Press.

Petraitis, J., Flay, B., & Miller, T. (1995). Reviewing theories of adolescent substance abuse: Organizing pieces of the puzzle. *Psychological Bulletin, 117,* 67-86.

Pierce J., & Gilpin, E. (1996). How long will today's new adolescent smoker be addicted to cigarettes. *American Journal of Public Health, 86(2),* 253-256.

Pope, M., Ashley, M., & Ferrence, R. (1999). The carcinogenic and toxic effects of tobacco smoke: Are women particularly susceptible? *Journal of Gender-Specific Medicine, 2(6),* 45-51.

Rutter, M. (1993). Resilience: Some conceptual considerations. *Journal of Adolescent Health, 14,* 626-631.

Sarason, I., Mankowski, E., Peterson, A. & Dinh, K. (1992). Adolescent's reasons for smoking. *Journal of School Health, 62(5)*, 185-190.

Sarigianai, P., Ryan, L., & Petersen, A. (1999). Prevention of high-risk behaviors in adolescent women. *Journal of Adolescent Health, 25,* 109-119.

Scal, P., Ireland, M., & Wagman Borowsky, I. (2003). Smoking among American adolescents: A risk and protective factor analysis. *Journal of Community Health, 28(2),* 79-97.

Seguire, M. & Chalmers, K. (2000). Late adolescent female smoking. *Journal of Advanced Nursing, 31(6),* 1422-1429.

Siener, K., Malarcher, A., & Husten, C. (2000). Women and smoking: Patterns, health effects and treatments. *Primary Care Update for Ob/Gyn,, 7,* 77-84.

Siqueira, L., Diab, M., Bodian, C., & Rolnitzky, L. (2000). Adolescents becoming smokers: The role of stress and coping methods. *Journal of Adolescent Health, 27,* 399-408.

Snow, P. & Bruce, D. (2003). Cigarette smoking in teenage girls: Exploring the role of peer reputations, self-concept and coping. *Health Education Research, 18(4),* 439-452.

Soldz, S., & Cui, X. (2001). A risk factor index predicting adolescent cigarette smoking: A 7-year longitudinal study. *Psychology of Addictive Behaviors, 15*, 33-41.

Stacy, A., Flay, B., Sussman, S., Brown, K., Santi, S., & Best, J. (1990). Validity of alternative self-report indices of smoking among adolescents. *Psychological Assessment: A Journal of Consulting and Clinical Psychology, 2(4),* 442-446.

Stead, M., Hastings, G., & Tudor-Smith, C. (1996). Preventing adolescent smoking: a review of options. *Health Education Journal, 55*, 31-54.

Tucker, J., Ellickson, P., & Klein, D. (2003). Predictors of the transition to regular smoking during adolescence and young adulthood. *Journal of Adolescent Health, 32,* 314-324.

Turbin, M., Jessor, R., & Costa, F. (2000). Adolescent cigarette smoking: Health related behavior or normative transgression. *Prevention Science, 1(3),* 115-124.

Tyas, S., & Pederson, L. (1998). Psychosocial factors related to adolescent smoking: A critical review of the literature. *Tobacco Control, 7*, 409-420.

U.S. Department of Health and Human Services. (2004). New surgeons general's report expands list of diseases caused by smoking. *Surgeon General's Report*, Retrieved September 17, 2004, from www.hhs.gov/news/press/2004pres/20040527a.html

van Roosmalen, E., & McDaniel, S. (1992). Adolescent smoking intentions: Gender differences in peer context. *Adolescence, 27*, 87-105.

Wang, M., Fitzhugh, E., Green, B., Turner, L., Eddy, J., & Westerfield, R. (1999). Prospective social-psychological factors of adolescent smoking progression. *Journal of Adolescent Health, 24*, 2-9.

White, R., Pandina, R., & Chen, P-H. (2002). Developmental trajectories of cigarette use from early adolescence into young adulthood. *Drug and Alcohol Dependence, 65*, 167-178.

# CHAPTER 3

## Will There be an Association between Cessation of Tobacco and the Experience of School Connectedness for Adolescent Females

The adolescent years are a pivotal time, due to the many transitions that occur simultaneously. Concerns about relationships, identity, academic achievement, social acceptance and health, each with their own requirements, can merge into a collection of stressors. Unfortunately, research confirms females are more likely to be using tobacco during the teenage years too (Health Canada, 2000). Indeed, by 2003 the rates for girls were higher (20% vs. 17%) than boys, despite the extensive availability of education about the harmful effects of tobacco use (Health Canada, 2003). Repercussions for tobacco use can last a lifetime. It has been suggested that the adolescent who begins smoking may find herself with an addictive habit that lasts for an average of 16 to 20 years (Pierce & Gilpin, 1996). Since most adults begin using tobacco as teenagers, investigation into the socioenvironmental factors that impact adolescent cessation can guide prevention and treatment strategies (Jones, Schroeder & Moolchan, 2004).

However, many youth make legitimate attempts to cease using cigarettes, and studies are interested in the strategies used and the supports required for successful cessation. Waldron and Lye (1990) found that students with higher educational aspirations were more successful in their attempts to quit smoking. Breslau and Peterson (1996) also found links between education and cessation. Ellickson, Tucker and Klein (2001) determined that school bonds create support for smoking cessation. Thus, the aim of this paper is to continue to focus on cessation and school factors. For the adolescent females who report they have quit using tobacco, will an association with school connectedness be discovered? School connectedness will be measured by using variables from a Student Health Survey (SHS) about attitude toward school, approximate grades and time spent on both homework and studying. If cessation does relate to school connectedness, effective intervention by counsellors and educators could assist adolescent females to make health related changes. Therefore, relevant projects that address the cessation concerns for adolescent females are vital, due to the consequences of tobacco use.

### *Research Rationale*

Research suggests that the use of cigarettes has associations with a variety of adolescent problem behaviors, including alcohol abuse and unsafe sexual activity (Donovan & Jessor, 1985; Turbin, Jessor & Costa, 2000). As well, other health-related behaviors are implicated with adolescent tobacco use. Teenagers choosing to smoke tend to experience inadequate nutrition, low levels of physical activity, unhealthy weight regulation strategies, insufficient sleep and poor dental hygiene (Coulson, Eiser & Eiser, 1997; Hawkins, 1992). Concerns are also being raised about tobacco use and illegal drug use, with suggestions that smoking often precedes the latter (Fleming, Leventhal, Glynn & Ershler, 1989). Lindsay and Rainey (1997) have explained that nonusers of tobacco are less likely to progress to other substances, in comparison to the adolescents that are smoking. They proposed that these results could be due to biochemical adaptations that

occur with nicotine use, as well as intrapersonal changes in risk perception and coping strategies.

Tobacco use is associated with the costs of physical damage, such as cigarette burns on clothing, furniture and flooring. Other financial costs include restrictions on job opportunities and living residences, as well as payments for tobacco products and smokers' supplies. The human costs include injuries, such as cigarette burns, and terminated relationships because of others' dislike of smoking. In fact, estimates are that a pack a day smoker spends more than $3, 770 each year on cigarettes, based on the average Alberta price of over ten dollars per package. (Alberta Alcohol and Drug Abuse Commission [AADAC], 2004). Municipalities are taking action to limit smoking in their communities to protect youth from the effects of second-hand cigarette smoke.

Since the use of tobacco has such detrimental effects, public health efforts have targeted those that quit, in order to understand and describe intervening variables that impact this phenomenon. Orlando, Ellickson and Jinnett (2001) described that the years from age 16 to 23 are especially important for intervention because this is when the transition to regular smoking typically occurs and smoking patterns stabilize. Yet the research efforts for adolescent tobacco cessation are limited, even as health studies have moved beyond prevention strategies and embraced cessation strategies (Burt & Peterson, 1998; Stanton & Smith, 2002). Indeed, the tradition has been to try and convince youth to abstain from all use of tobacco, instead of helping youth to quit (Houston, Kolbe & Eriksen, 1998).

However, adolescents are considering their health and becoming inspired to make attempts at cessation. For example, in 2003, Health Canada (2004) estimated that 64% of tobacco using adolescent girls (ages 15-19) would make 1-3 quit attempts in a 12-month period. Backinger and Leischow (2001) estimate that up to 11% of adolescents will attempt self-initiated smoking cessation. Of interest, Stanton, Lowe and Gillespie (1996) found that more of their female grade 10 students were taking action to quit smoking, compared to the males. It seems adolescent females are motivated to quit using tobacco and there are some youth that will succeed at this challenging task. For instance, the Alberta rate of quitting, among 15-24 year old females is estimated at 8% (Health Canada, 2004). However, this relatively low quitting rate indicates how necessary both research and interventions are to assist with adolescent tobacco cessation.

Suggestions have been made about the importance of understanding the motivation for cessation within certain subgroups, such as adolescent females (Riedel, Robinson, Klesges & McLain-Allen, 2002). Since many youth that desire to quit require practical supports to make their attempts successful, identifying relevant gender factors is essential (Vuckovic, Polen & Hollis, 2003). Also, Ershler, Leventhal, Fleming and Glynn (1989) have suggested that professionals need to be "developing techniques for encouraging and supporting quitting efforts in those youngsters who are already smoking at occasional and daily levels" (p.365). At this point, since researchers are suggesting that a segment of youth do not have a positive school experience, and that this impacts their health behaviors, it would be beneficial to address the cessation issues of adolescent females that are engaged in tobacco use (Nutbeam, Smith, Moore & Bauman, 1993).

Health Canada has suggested that the relationship between tobacco use and schoolwork is quite straightforward: "Smoking is associated with poor health, and poor health is associated with poor performance at school" (2002a). In order to develop this concept further, investigators have focused on the associations between rates of tobacco use and school factors. Stead, Hastings and Tudor-Smith (1996) found that alienation from school and low academic achievement were two aspects that contributed to adolescent smoking. Wang, Fitzhugh, Green, Turner, Eddy and Westerfield (1999) also agreed some of the smoking predictors for adolescents include perceived school performance, dislike of school, and class absences. As well, as the previous research study has found, the adolescent females' experience of school connectedness, when measured by school attitude, grades and homework time, has a significant association with rates of tobacco use. The female adolescents who were regular users of tobacco, tended to dislike school, estimate lower school grades and average less than 2 hours per week of homework, relative to nonsmokers and rare smokers. Therefore, what happens to adolescent females' sense of school connectedness, if she is able to cease using tobacco?

According to the theories that focus on the interaction between the individual and the environment, such as Problem Behavior Theory or Social Bonding, adolescents can be discouraged from health risk behaviors. For example, Skinner, Massey, Krohn and Lauer (1985) state:

> ...if adolescents who already smoke start to develop stronger ties to conventional sources and begin to disassociate themselves from people who reinforce smoking, then the likelihood would increase that cigarette smoking would decrease and ultimately stop. Thus, a strengthening of the bonding elements...creates an environment that leads to cessation of cigarette smoking (p.357).

Therefore, the effects of bonding with conventional sources, such as school, restrains adolescents from engaging in tobacco use. Indeed, Sussman, Dent, Nezami, Stacy, Burton and Flay (1998) speculate whether quitting smoking actually "reflects a symbolic return to conventional society" (p.27).

Jessor's Problem Behavior Theory has distinguished between conventional and unconventional variables and believes that youth that are using tobacco are engaged in an activity that is undesirable by society's standards. In contrast, involvement with conventional sources, such as academic pursuits, controls against involvement in problem behavior (Donovan, Jessor & Costa, 1991). Skinner et al., (1985) has described that "smoking is the result of the weakening of commitment to school" and for the adolescents that quit using tobacco, this weakening is only temporary (p.371). For the adolescents who continue to smoke, there is a continued weakening, which further impacts their tobacco use. As well, Charlton (2000) has found that many smokers reject school values, and may express this by being absent from school.

Therefore, this research study proposes that there will be an association between the cessation of tobacco use and the adolescent females' experience of school connectedness. In order to operationalize this construct of school connectedness, four survey questions from the *Student Health Survey* (SHS) will be presented, including attitude toward school, approximate grades, as well as estimated homework time and study time per week. The data from the adolescent females who have defined themselves as former smokers or active smokers will be compared, using each of the variables that have been chosen to represent school connectedness. It has been proposed that the cessation of tobacco will impact the female adolescents' school attitude, grades, homework and study time, which will signify an improved view of school connectedness.

In order to understand the rationale for this current study, the acquisition process for tobacco use will be outlined. Four phases of smoking behavior have been proposed by Leventhal and Cleary (1980), and other researchers have also focused on the stages of smoking (Perry & Staufacker, 1996). Initially, there is the preparation stage, where the adolescent has never used tobacco, but is anticipating and considering this behavior. Next is the initiation stage, where the adolescent has commenced using tobacco, but still at the rare level. The experimentation stage begins when cigarettes are used occasionally, and the user has little concern about dependence. Following this phase is maintenance, where regular smoking behavior occurs, which may have some typical pattern of use, such at certain times. Therefore, there are three transitions that are proposed for the attainment of tobacco (Dalton, 1998). Youth that are experiencing occasional to regular tobacco use are in the final phase, and these are the participants for this study. They are assumed to be different from the rare smokers and the quitters, and therefore research is needed for this specific profile of tobacco using adolescents (Wang, Fitzhugh, Eddy & Westerfield, 1996).

The format for this study is to address the occasional and regular adolescent smokers as one group, in order to contrast these females with the tobacco quitters. This decision was made, in part, to recognize that both these types of tobacco users are at risk for the complications of smoking behavior. For example, Ellickson, Tucker and Klein (2001) found that behavioral and academic problems for young adolescents are possible with experimenting and committed smokers, although the latter are the highest risk segment. In addition, since "the occasional cigarette smokers of today may become the FS (frequent smoker) of tomorrow", it was determined that defining smoking status with occasional/regular tobacco users was feasible (O'Callaghan & Doyle, 2001, p.468). Pederson and Lefcoe (1986) combined regular and occasional smokers to form a category of current smokers and used this to contrast against triers of tobacco. As well, Health Canada (2002) researchers classify current smokers as occasional and daily users; they advise that 23% of Albertans age 15 and over are smoking, with 5% smoking occasionally. Also, the grouping of occasional and regular smokers reflects the AADAC (2003) statistic that 16% of young Albertans smoke daily or occasionally. Thus, for this study the term "active smokers" will include both the occasional and regular tobacco using female adolescents that completed the SHS. This paper will contrast the active smokers with the adolescent females that agreed they had quit tobacco, in order to understand the associations between tobacco cessation and school connectedness. The

following review first highlights what effect nicotine has on cessation, then provides an examination into the relationships between school factors and adolescents' tobacco cessation.

## Literature Review

### *Issues of Tobacco Cessation*

Since adolescence is when tobacco use generally begins, for most Canadians that have ever smoked, it is imperative that health researchers keep the spotlight on the experiences of adolescent females. Indeed, gender based research has suggested that overall, females were more likely that males to have ever tried smoking a cigarette (Waldron, Lye & Brandon, 1991). Also, the rates of tobacco use for adolescent females are increasing (Sunday & Folan, 2004). As a result "although smoking typically begins in adolescence as a result of psycho-social causes, once established, it is maintained by both psychic forces and physiologic dependence and addiction to nicotine" (Dozois, Farrow & Miser, 1995, p.1486). Consequently, there is a shift from social reasons for use, to more intrapersonal requirements, due to the influence of nicotine (Perry & Staufacker, 1996).

Some studies have found that the consequence of occasional and regular smoking can be dependence on nicotine, especially with long term use (Horn, Fernandes, Dino, Massey & Kalsekar, 2003; Lloyd-Richardson, Papandonatos, Kazura, Stanton & Niaura, 2002). However, Horn et al., have shown that some teens (20%) maintained low dependence on nicotine, despite years of use. They stated that due to the insufficient understanding of adolescent dependency, the effect on cessation is still not completely identified. Furthermore, researchers believe that if youth are demonstrating some of the characteristics of addiction, it is still unclear how it develops and is accurately measured, relative to adults (Johnson, Bottorff, Moffat, Ratner, Shoveller & Lovato, 2003). As well, some adolescent smokers recognize they are dependent on nicotine, yet few actually anticipate the difficulties they may have with cessation (Colby, Tiffany, Shiffman & Niaura, 2000). Therefore, many questions remain to be studied, including adolescents' own perceptions of nicotine dependency and cessation (Stanton, Lowe & Gillespie, 1996) as well as the development of addiction within the context of adolescence (O'Loughlin, Kishchuk, DiFranza, Tremblay & Paradis, 2002).

Now that there is an awareness that cessation is greatly impacted by issues of dependence, what is the interaction with gender? Indeed, women may experience specific barriers that interact with their plans to quit tobacco. Orlandi (1987) has described these as predisposing factors that already exist prior to the individual's decision to change her behavior. One study found that relative to the males, the adolescent females trying to sustain their attempts reported more circumstances that would tempt them to smoke (Sussman et al, 1998). Also, certain physiological factors can allegedly concern women when ceasing tobacco use and include: greater withdrawal symptoms, different sensitivity and tolerance to nicotine, and timing effects in relation to the menstrual cycle (Gritz, Nielsen & Brooks, 1996). In terms of the nicotine itself, Blitstein,

Robinson, Murray, Klesges and Zbikowski (2003) proposed that women are inclined to metabolize nicotine slower than men do. As a result these "lower levels of nicotine clearance may indicate that women who begin smoking are more likely to become addicted and progress to dependent levels of smoking" (p.456). All these studies have suggested that females were perhaps more addicted to nicotine or experience more subjective symptoms of withdrawal. Overall, Sussman et al., (1998) state that due to the paucity of data on adolescent tobacco use cessation, any ideas are still speculative when considering gender and quitting factors. Further studies are required to illuminate the impact of gender on cessation, as well as projects that examine subgroups of adolescent female smokers (Niaura & Abrams, 2002; Wetter, Kenford, Smith, Fiore, Jorenby & Baker, 1999).

*School Factors and Adolescent Tobacco Cessation*

With regards to cessation and school factors, what does the research suggest is occurring? Research findings support that "self-initiated attempts to quit are common among adolescents" (Ershler, Leventhal, Fleming & Glynn, 1989, p.375). It appears that youth are able to determine when they have reached a level of tobacco use that they consider unacceptable (Johnson, Kalaw, Lovato, Baillie & Chambers, 2004). Indeed, from their survey, Stone and Kristeller (1992) determined that 80% of occasional adolescent tobacco users and 65% of daily users wanted to quit. Hansen, Collins, Johnson and Graham (1985), in their study of high school students, explained that "it is likely that those who attempt to quit begin to question the place of smoking in their lives and fail to find themselves personally enhanced by their behavior" (p.270). Thus, youth are interested in quitting and many professionals are investigating what assists students to make this effort.

Certain factors have been found that impact the success or failure of tobacco cessation for youth, including school performance (Bonard, Janin-Jacquat & Michaud, 2001). As well, education attainment has been found to be important, when using retrospective studies with adults (Khuder, Dayal & Mutgi, 1999; Mothersill, McDowell & Rosner, 1988). These studies have found that level of education significantly affected the cessation rates. For example, individuals who do not attain a high school education are found to be at risk to fail at abstinence from cigarettes (Rose, Chassin, Presson & Sherman, 1996). Also, surveys of current smokers in Alberta have found that those with lower levels of education are more likely to be daily smokers (AADAC, 2004). Further studies are needed to assess the impact of school related features, since "adolescents in general are more affected by social-psychological factors than are adults" due to teens' overall circumstances (Wang et al., 1999, p.8).

An extremely relevant study by Huebner, Shettler, Matheson, Meszaros, Piercy and Davis (2005) examined ecological factors associated with female adolescents classified as former, current and nonsmokers. Their study of 2029 females in grades 7-12 focused on the variables that distinguished former smokers, defined as girls who were not smoking for the month previous to the survey. In comparison to the current smokers, they found that the quitters achieved higher grades and had more school attachment, in

addition to higher self esteem, less suicidal behavior and more parental involvement. School attachment was measured using 4 items, and 25% of the participants were former smokers. The results suggest that ecological variables are helpful markers for effective assessment and intervention with teenage females when addressing tobacco use.

In an adolescent panel study designed to investigate the gender differences with smoking cessation, variables that were likely to impact cessation were examined. Ellickson, Tucker and Klein (2001) incorporated bonds to school, peers and family in their assessments that concluded with students in Grades 10 and 12. School bonds were defined in terms of academic success and stability. The majority of the tobacco users were regular smokers and smoking cessation was assessed through self-report and based on having not smoked at all over the year. They found that "female smokers were more likely to quit if they had stronger bonds with school" (p.193), which they suggest may be due to the support and encouragement that teens receive when they feel connected to sources like school and family.

Burt and Peterson (1998) stated that their report on adolescent smoking cessation, among various school districts, was one of the first ever completed. They surveyed 12$^{th}$ grade students to better understand students' cessation behavior. By classifying the participants into a set of four transitions toward abstinence, they believed this could capture all aspects of quitting tobacco. The series began with questions about intention to quit, and the final category was measured by participants achieving one-year tobacco free. Only the students that agreed they were established smokers were included for the project. Several variables were studied, including gender, peers, age of initiation and social dissatisfaction. Their proposition was "that students disaffected with the academic environment may also be less receptive to the conventional social norms that discourage continued tobacco use" (p.321). Therefore, they decided to use students' grade point average to indicate the concept of dissatisfaction. The results showed fluctuations in the association of grade average with the different cessation levels, yet there was no clear trend to report. Females were less likely than males to achieve ongoing cessation, once an attempt to quit tobacco had been made.

Another research survey focused on adolescents that were current smokers in 1989, and followed up to review their cessation outcomes in 1993. Zhu, Sun, Billings, Choi and Malarcher (1999) worked with 633 participants; former smokers were defined as those adolescents that had not smoked for 30 days prior to the 1993 survey. They chose a series of variables as potential predictors, including quitting history, family smoking patterns, and three questions to address school factors. These researchers wanted to know about the participants school policy on smoking, their attendance in a class about tobacco use and their school performance. A univariate analysis identified nine variables that were predictive of quitting success, one of which was school performance. Ultimately, they report that the risk factors for failure of cessation have an additive effect, and suggest that effective interventions should be tailored to match each individual.

To compare smoking cessation and onset between the developmental transitions of youth, researchers observed students from age 13 to 23, using three waves of data collection.

Early and late adolescence, as well as early adulthood were examined. Ellickson, McGuigan and Klein (2001) used predictor variables such as environmental influences, smoking attitudes, problem behaviors, sociodemographic variables and weak bonds with school. The last variable was demonstrated by using earned grades and expected academic intentions or achievement. Indications that school grades were significant were established, and were described as robust predictors. During the transition from junior high to high school, poor grades were described as one factor that could inhibit smoking cessation. For the transition from high school to young adulthood, poor grades also contributed to inhibited cessation. It was suggested that "programs aimed at improving school performance might have positive effects on smoking behavior" (p.107) due to the effects of school grades.

Hu, Lin and Keeler (1998) surveyed adolescents from ages 12 to 17 and divided them into three categories based on their smoking status. The former and current smokers were then further divided into those who made some quit attempts, those who smoked, and those who had quit, all within the month prior to the survey. Demographic information was also collected, such as gender, income, ethnicity and school performance. Participants provided self-report data about their performance in school, using four options that included better than average to below average. This study reported that the students who performed below average in school, and with low income, made the least number of quit attempts. Thus, their research data suggested that students that perceive they are below average in school are less likely to become former smokers.

To concentrate on the precursors of smoking cessation, Engels, Knibbe, de Vries and Drop (1998) designed a longitudinal study with 14-15 year olds, and reinterviewed them after three years. They used four stages of smoking cessation in order to explore which factors impact the different stages. The independent variables were smoking cognitions and habits, as well as social influences, including smoking context. School was identified as one of the situations that could influence tobacco use. Their results indicated that the context of smoking, when addressing cessation, is relevant. Indeed, the attempt to quit can be impacted by the social situation where the youth is smoking, such as the school environment.

In order to understand the features of tobacco continuity and change, Chassin, Presson, Rose and Sherman (1996) used a cohort-sequential study of adolescence to adulthood. They wanted to use the longitudinal data to understand trends in cigarette use, cessation and change. Since they suggested that "educational attainment is currently the most powerful demographic predictor of smoking behavior" (p.479), they included this aspect in their study. In addition, gender, age, parental smoking and individual levels of smoking behavior were examined. Educational attainment was classified as either having a lack of post high school achievement or some post-secondary success. Their outcomes indicated that the for the less educated tobacco users, it was less likely that they were able to stop smoking. They attributed this result to the possibility that the smokers that follow through with post secondary education could have been less committed users, therefore their cessation becomes related to their initial smoking rate.

With a plan to estimate which factors were related to smoking cessation, Breslau and Peterson (1996) surveyed young adults about their experiences. Their epidemiological research asked participants about their age of smoking initiation, nicotine dependence and smoking cessation. They classified former smokers as being cigarette free for at least one year before the research interview. Covariates for the project were gender, ethnicity and education. This study found that "the strongest predictor of smoking cessation was level of education, with smokers who completed college being 2.5 times as likely to quit as those with no college education" (p.217). They proposed that this disparity can be traced back to high school, where a lower rate of smoking has been found for students that believe they will continue on to college.

Inquires about the relationship between cessation and school factors has demonstrated that there are noteworthy results for adolescents. Further investigations are required, especially for adolescent females, since much of the research is trying to establish a foundation for understanding adolescent cessation. This study will focus on the associations between quitting tobacco and the adolescent females' experience of school connectedness. By using the variables from the SHS about attitude toward school, estimated grade average, time spent on homework and on studying, the concept of school connectedness will be attended to. Becoming aware of factors that impact all young womens' cessation efforts can assist counsellors and educators to enhance the physical and academic health of their students.

## Method

### *Participants*

A total of 512 male and female students, from grades 9-12, agreed to help researchers by completing a University of Alberta questionnaire during their classroom time. Two hundred and seventy four female students, from communities close to Edmonton, Alberta, responded to the *Student Health Survey* (SHS) about their health and school experiences.

For the purpose of this research question, only the responses from the female adolescents were studied (n=274). The ages of the students ranged from 14 to 18, with a mean of 17 years old. Only the participants that agreed to answer questions about their tobacco use and certain school factors were included (n= 153). The females that were either nonsmokers or rare users of tobacco were excluded (n=121). Thus, 56% of the responses from the SHS were used, by focusing on the female participants that agreed they were either active or former users of tobacco.

### *Instrument*

Originally titled the Adolescent Sexuality Survey, the SHS required the participants to reply about their education, health and sexuality, as well as provide ideas about their background characteristics. The format of the survey was primarily multiple choice, with

some short answers, and was organized by Gretchen Hess, PhD. (personal communication).

It was determined that isolating the events of the girls was important, in order to understand their experiences with smoking. Since studies have suggested that a greater number of girls are using tobacco (AADAC, 2003), the separation of genders is of value for more in-depth information in this phenomenon where girls outnumber boys. In addition, gender has been scarcely examined as a factor for tobacco cessation among adolescents (van Roosmalen & McDaniel, 1992).

Since the goal of this current research is to understand if there is a relationship between adolescent girl's use of tobacco and connection to school, only the following questions from the SHS were used:
(See Appendix: Part 1- Background Information, Number 14, 19, 20, 23, 24).

I. The question to measure use of tobacco was:

**Which statement best describes your use of tobacco?**

1. I never have used any tobacco products
2. I have rarely smoked or chewed tobacco
3. I am an occasional smoker (or chewer) of tobacco
4. I used to use tobacco products, but have quit
5. I smoke (or chew) tobacco regularly

II. The four items used to represent school connectedness were:

**Do you like school?**

1. I love school
2. I like school more than most of my friends
3. Its OK (average)
4. I don't like school very much
5. I hate school
6. Other_____(write in)

**What is your approximate grade average in school?**

1. Less than 40%
2. 40-50%
3. 50-65%
4. 65-80%
5. 80-100%

**How much time, on average, do you spend doing homework each week?**

1. None
2. Less than one hour
3. 1-2 hours
4. 3-5 hours
5. more than 5 hours

**How much time, on average, do you spend studying each week?**

1. None
2. Less than one hour
3. 1-2 hours
4. 3-5 hours
5. more than 5 hours

***Ethics Approval and Procedures***

After the school provided consent for the research project, informed consent was then provided by the students' parents or guardians. The students who agreed to be involved in the initial SHS study were told about the purpose of the questionnaire and that their participation for this research was voluntary. All participants were assured about confidentiality for the SHS and were allowed to withdraw if any concerns arose for them. In addition, the questionnaires were contained within sealed envelopes and no identifying names were used, to ensure the privacy and anonymity of students' responses. As well, the participants completed the study at the same time so that they could not discuss or influence their respective responses. Supervision of the study materials was provided by Hess and school personnel.

The results from the original SHS yielded data from 274 female adolescents. In 2003, the University of Alberta Faculties of Education and Extension Research Ethics Board (REB) provided permission to use this previously collected data to further understand female students' attitudes and behaviors about health-related behaviors.

***Data Analysis***

For this current research question, only the replies from the female participants were reviewed, to determine whether there is an association between ceasing tobacco use and school connectedness. The initial sample was comprised of 274 adolescents, yet only the students who responded to particular queries about tobacco use were the focus for this study. The SHS included five categories to measure tobacco use, and the participating students were to subjectively rate their level of consumption.

This research plan utilized only three of the original five categories. The participants that agreed they were either nonsmokers or rare smokers were omitted for this study. Therefore, the female adolescents who perceived themselves as quitters, occasional users

or regular users were the focus. As well, the occasional and regular categories were combined, to create a new category called active smokers (n=108). This comprised 39% of the overall female participants. Other studies have also used related conceptual definitions. Researchers such as van Roosmalen and McDaniel (1992) labeled smokers as those that either experimented with cigarettes or used them regularly. Hu, Lin and Keeler (1998) collapsed daily and occasional smoking status (over the past thirty days) to define current smokers. As well, cigarette consumption has been determined by the tobacco users classified as daily or occasional smokers (Health Canada, 2000). The formation of the category active tobacco users was intended for statistical analysis and to review any associations between tobacco rates and school connectedness.

The decision was made to omit the nonsmokers and rare smokers from this current study. First, researchers recommend that these two categories used to identify consumption can be quite similar. Indeed, Soldz and Cui (2001) report that "light smokers are more like nonsmokers" (p.39). Also, Health Canada (2002b) defines individuals that have smoked fewer than 100 cigarettes in their lifetime as "never-smokers" and suggested they represent individuals that try smoking, but do not become habitual smokers. It has been recognized, through published literature, that "adolescent smokers tend to smoke with less regularity; they are less likely to smoke daily, and when they do, they tend to smoke fewer cigarettes per day" relative to adult smokers (Colby, Tiffany, Shiffman & Niaura, 2000, p.92). Therefore, it is possible that the adolescents that chose the rare smoker definition could be consuming tobacco at a low rate. Second, since the original SHS did not measure any frequency rates, but relied on the participants subjective interpretation of the questions about tobacco use, there was no ability to confirm the frequency rates. Thus, it was determined the responses from the rare smokers (and nonsmokers) could be eliminated for this particular research question, since the focus is on understanding tobacco cessation.

Quitters were all defined by self-report, consistent with all the other categories on the SHS. Self-report for cessation are considered to be reliable measures for determining abstinence or cessation from smoking behavior (Fritz, 2003). Within the SHS sample of females that classified themselves as ever being involved in tobacco using behavior (ever-smokers), 23% of the female adolescents were labeled as former smokers (n=45), which seems consistent with other research studies. For example, Huebner et al., (2005) found that 25% of their female adolescent participants reported ceasing tobacco use within a month of their survey. Health Canada (2001) reported the overall youth quit rate to be 21%, and state that females' quit rate is at 22%. Therefore, this research study will use the data from the adolescent females' who chose to define themselves as quitting tobacco.

The results from the active smokers (occasional and regular tobacco users) and the quitters were then analyzed, to review any associations between cessation and the adolescent females' sense of school connectedness. For this research question, it was determined that attitude toward school, estimated grades and average time spent on homework and on studying could qualify as indicators of school connectedness.

With regards to the variables that comprised school connectedness, some adjustments were completed to allow for statistical analysis. For the survey question about *attitude toward school,* which was phrased as "Do you like school?" there were three participant responses that were not included (n=150). At the initial data entry stage, these three responses were short answer responses that were subjectively placed into either the quit or regular smoker sections, and then included in the total number of participants for the question about school attitude (n=153). It was decided to delete these three responses, since there was no ability to verify the short answer responses about school attitude.

To allow for statistical analysis, the following data transformation occurred. It was determined that only three categories were required, instead of the original six categories. Originally, the responses for the SHS resembled: 1) I love school; 2) I like school; 3) It's ok; 4) I don't like school; 5) I hate school; 6) other (requiring short answer). The last category was deleted, due to the requirements for statistical analysis. Next, the first two responses were recoded into one category, as were the fourth and fifth responses. The categories were collapsed because of the low number of cases that were found when the remaining five categories were separated. Therefore, the new ordinal scale resulted in three attitudes that were classified to represent "like", "average" and "dislike" school. This simple scale was thought to be reflective of the original purpose of the SHS to understand the adolescents' attitude toward school.

For this study, the variable that described the adolescent female's *approximate grade average* was also transformed. Since one participant declined to answer the question, there were 152 responses. Original responses about grades were: 1) less than 40%; 2) 40-50%; 3) 50-65%; 4) 65-80%; 5) 80-100%. None of the participants estimated that their marks were any less than 40%, therefore the first response was never chosen. The second response was chosen by only three participants. Therefore, the categories were recoded due to the low number of cases in the original five categories. The creation of three categories was believed to reflect a range of approximated grades and to be aligned with the original intent of this SHS question. The responses were sorted into sets of: 1) $\leq$ 65%; 2) 65-80%; and 3) $\geq$ 80%. It was determined that this reorganization would allow for statistical analysis.

For the set of questions to measure average *homework time* each week, the SHS participants were given five choices. The options to choose were: 1) none; 2) less than one hour; 3) 1-2 hours; 4) 3-5 hours; 5) more than 5 hours. All possible participants responded (n=153), however, only two participants chose the first option. Therefore, again due to the small number of cases in the statistical analysis, the categories were combined and recoded. It was only necessary to combine the first three responses. The items to describe time spent on homework became: 1) $\leq$ 2 hours; 2) 3-5 hours; and 3) $>$ 5 hours.

Finally, it was also decided to reorganize the set of SHS questions inquiring about the average *study time* each week for the adolescent. The same arrangement of five choices was provided; one student declined to provide her answer (n=152). Participants selected from the following: 1) none; 2) less than one hour; 3) 1-2 hours; 4) 3-5 hours; 5) more

than 5 hours. However, the last category (>5 hours) did not have any respondents, so naturally only four categories remained. The revised arrangement had the following categories: 1) none; 2) < 1 hour; 3) 1-2 hours; and 4) ≥ 3 hours.

## Results

The data from the SHS was reorganized to allow for statistical analysis. The analysis was performed using SPSS, using the chi-square test of association to fulfill this research study. The following tables show the relationship between adolescent females' self-reported former tobacco use or active tobacco use and each of the variables chosen to represent school connectedness.

| TABLE 3-1 | | | Adolescent Females' Reported Attitude Toward School | | | |
|---|---|---|---|---|---|---|
| | | | 2=Like | 3=OK (Average) | 4=Dislike | Total |
| **Smoking Rate of Females Based on Self - Reports of Tobacco Use** | Former Smokers (Quitters) | Count | 15 | 23 | 6 | 44 |
| | Active Smokers (Occasional and Regular) | Count | 12 | 70 | 24 | 106 |
| TOTAL | | Count | 27 | 93 | 30 | 150 |

**Chi-Square Tests**

| | Value | df | Asymp. Sig. (2-sided) |
|---|---|---|---|
| Pearson Chi-Square | 11.167(a) | 2 | .004 |
| N of Valid Cases | 150 | | |

The results from the first variable representing school connectedness, *attitude toward school*, suggest that there is a significant association between tobacco cessation and adolescent females' beliefs about school. Within this sample, self-reported levels of tobacco use have an association with attitude toward school, with chi square value at 11.17, significant at the .05 level (df=2).

| TABLE 3-2 | | | Adolescent Females' Approximate Grade Average | | | Total |
|---|---|---|---|---|---|---|
| | | | ≤65% | 65-80% | ≥80% | |
| **Smoking Rate of Females Based on Self - Reports of Tobacco Use** | Former Smokers (Quitters) | Count | 14 | 27 | 4 | 45 |
| | Active Smokers (Occasional and Regular | Count | 35 | 61 | 11 | 107 |
| TOTAL | | Count | 49 | 88 | 15 | 152 |

**Chi-Square Tests**

| | Value | df | Asymp. Sig. (2-sided) |
|---|---|---|---|
| Pearson Chi-Square | .136(a) | 2 | .934 |
| N of Valid Cases | 152 | | |

The results from the second variable representing school connectedness, *approximate grade average*, does not suggest there is a significant association between tobacco cessation and adolescent females' estimates for grades. There is no significant result for the chi square statistic, and therefore self-reports of quitting tobacco does not have an association with grades, within this sample.

| TABLE 3-3 | | | Adolescent Females' Average Homework Time Per Week | | | Total |
|---|---|---|---|---|---|---|
| | | | ≤2 hours | 3-5 hours | >5 hours | |
| **Smoking Rate of Females Based on Self - Reports of Tobacco Use** | Former Smokers (Quitters) | Count | 23 | 14 | 8 | 45 |
| | Active Smokers (Occasional and Regular) | Count | 69 | 29 | 10 | 108 |
| TOTAL | | Count | 92 | 43 | 18 | 153 |

**Chi-Square Tests**

| | Value | df | Asymp. Sig. (2-sided) |
|---|---|---|---|
| Pearson Chi-Square | 3.027(a) | 2 | .220 |
| N of Valid Cases | 153 | | |

The results from the third variable representing school connectedness, *weekly average time spent on homework,* does not suggest there is a significant association between tobacco cessation and time that adolescent females spend on homework. There is no significant result for the chi square statistic, and therefore self-reports of quitting tobacco does not have an association with average homework time, within this sample.

| TABLE 3-4 | | | Adolescent Females' Average Study Time Per Week | | | | Total |
|---|---|---|---|---|---|---|---|
| | | | None | <1 hour | 1-2 hours | ≥3 hours | |
| **Smoking Rate of Females Based on Self - Reports of Tobacco Use** | Former Smokers (Quitters) | Count | 5 | 14 | 19 | 7 | 45 |
| | Active Smokers (Occasional and Regular) | Count | 9 | 43 | 48 | 7 | 107 |
| TOTAL | | Count | 14 | 57 | 67 | 14 | 152 |

**Chi-Square Tests**

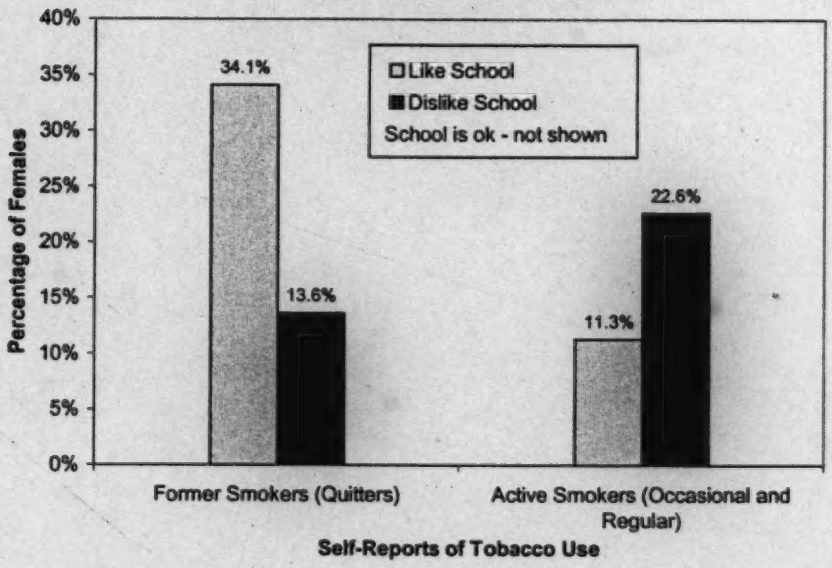
| | Value | df | Asymp. Sig. (2-sided) |
|---|---|---|---|
| Pearson Chi-Square | 3.791(a) | 3 | .285 |
| N of Valid Cases | 152 | | |

The results from the fourth variable representing school connectedness, *weekly average time spent on studying,* does not suggest there is a significant association between tobacco cessation and time that adolescent females spend studying. There is no significant result for the chi square statistic, and therefore self-reports of quitting tobacco does not have an association with time spent on studying, within this sample.

A summary of the results are as follows: from the first variable representing school connectedness, *attitude toward school*, there is a significant relationship between tobacco cessation and adolescent females' beliefs about school, with chi square value at 11.17, significant at the .05 level ($\chi^2$=11.2, p≤.05,df=2).

In order to depict the significant results of this study in a visual format, the results are displayed in Figure 3-1. Only the data from the females that either liked or disliked school were profiled, in order to clearly outline the pattern of significance.

**Figure 3-1**
**Adolescent Females' Attitude Toward School**




The results from the second variable representing school connectedness, *approximate grade average*, does not suggest there is a significant relationship between tobacco cessation and adolescent females' estimates for grades. As well, the results from the third variable representing school connectedness, *weekly average time spent on homework*, does not suggest there is a significant relationship between tobacco cessation and adolescent females' time spent on homework. And finally, the results from the fourth variable representing school connectedness, *weekly average time spent on studying*, does not suggest there is an association with tobacco cessation.

Based on the question for this research study, it appears that the adolescent females who reported they had ceased using tobacco would not experience school connectedness differently that the other actively smoking female participants. However, there was an association found between cessation of tobacco and *attitude toward school*, which does suggest that the adolescent females' beliefs about school and her self-reports about

cessation may require further exploration. There were no associations found for grades or school work, which may be due to the fact that there was only one question available to determine her cessation, instead of a set of questions addressing degrees of cessation.

## Discussion

This study attempted to add to the research about tobacco cessation and school connectedness for adolescent females. Previous research has suggested that it is essential to focus on the adolescent's environment, such as school, as this can impact health related behaviors (Nutbeam et al., 1993). Youth who perceive their school attachment and their achievement in a negative manner, may resort to the use of tobacco to cope (Seguire & Chalmers, 2000). Therefore, this study proposed that adolescent females that ceased using tobacco, relative to the active smokers, would have a different experience of school connectedness. Consequently, other research found that adolescent female former smokers, compared to current smokers, were found to have higher grades (Hu, Lin & Keeler, 1998) and more school attachment (Huebner et al., 2005).

The results of this study have found that the adolescent females who quit tobacco, in comparison to the active smokers, do not necessarily experience greater school connectedness. This concept of school connectedness was measured using attitude toward school, estimated grades, and time spent on homework and studying. Of interest, the adolescent females who ceased using tobacco do appear to have a significantly different *attitude toward school*, in comparison to the active smokers, which suggests that school factors deserve additional attention. Future research may investigate whether self-reported success at cessation has positive consequences that impact beliefs about school. It has been suggested that there are underlying dimensions of motivation and self-efficacy that influence the quitting process (Lichtenstein & Glasgow, 1997). It can be speculated that these aspects of her personality could generate both her school attitude and approach to quitting smoking, after all, she would have experienced these qualities to attempt cessation. On the other hand, it would be interesting to know if bonds to school, which have been defined as a psychosocial factor impacting smoking cessation, may create an inclination for behavior change (Ellickson, Tucker & Klein, 2001). It could also be that the adolescent females who defined themselves as former smokers were qualitatively different from the active smokers, prior to smoking initiation, which impacts their school attitude (Huebner et al., 2005).

Nevertheless, in this study, approximate *grade average* did not have an association with cessation of tobacco. These results differed from the findings that supported a significant relationship between school performance and tobacco cessation (Ellickson, McGuigan & Klein, 2001; Hu, Lin & Keeler, 1998). Perhaps the adolescent females that reported that they quit using tobacco had very recently changed their behavior, and therefore this had not impacted their grades at the time of the survey. Of interest, in their study with adolescents, Sargent, Mott and Stevens (1998) examined possible predictors associated with cessation. They found that there was no relationship between self-assessment of school performance with cessation of smoking for the youth aged 12 to 18 years old.

As well, Burt and Peterson (1998) used grade point average to measure the dissatisfaction of the students. Their results found fluctuations in the association of grade average with the different cessation levels, with the absence of any clear trends. These types of findings can indicate that more investigations are necessary with regards to students' grades and connectedness to school.

Also, the adolescent females' average time spent on *homework* or *studying* was not significant with cessation of tobacco, perhaps because these factors are part of a pattern of behavior that may not be related to cessation. Of interest, in their investigation into 15-20 year old abstainers, quitters and smokers, Bonard, Janin-Jacquat and Michaud (2001) found that the former smokers still reported more school problems, were not satisfied with their school, believed their school results were below average and missed school more frequently. The limitation of this research was that the former smokers were defined by one self-report question about their use of cigarettes. If the participants responded that they had stopped smoking, then these researchers categorized them as former smokers. They state that their study was designed to study health in general, and not smoking in particular, which lead to the omission of certain details about the participant's cigarette patterns.

Due to the stress of having problems at school, teens may consider cigarette initiation (Vuckovic, Polen & Hollis, 2003). Therefore, it is possible that school variables, such as study and homework time, may be more influential when it comes to smoking initiation and progression, and have less of an impact with cessation. Indeed, researchers are currently focusing on the variables that reinforce the continuation of smoking, as these can pose challenges to quitting behavior (Jones, Schroeder & Moolchan, 2004). Additionally, just as Jessor (1987) has suggested, the adoption of problem behaviors are functional for the teens that choose tobacco. Thus, once the adolescent females begin using tobacco, the process of reinforcement and addiction starts to take over, and becomes the most salient issue when attempting to quit (Chen, White & Pandina, 2001). In view of this, researchers suggest that low cessation rates are related to "the role that nicotine addiction plays in the maintenance of smoking in adolescents " (Sargent, Mott & Stevens, 1998, p.392).

For adolescent females, her perceived lack of bonds to school, which initially were part of the problem, become secondary to the tobacco consumption and the accompanying dependence and lifestyle issues. Therefore, the activities and identity that have been gained as a smoker are more influential with regards to tobacco cessation than her original concerns with homework and studying. In effect, the "cessation success is surprisingly insensitive to social and demographic influences. We suggest the possibility that quitting is so strongly motivated by reaction to the consequences of smoking itself that differential effects of such variables are overridden" (Burt & Peterson, 1998, p.326).

Another factor that could impact the results of this study is the measurement of cessation. Research is determining that there is potential for smoking cessation to occur in stages, instead of being viewed as a dichotomy. DiClemente, Prochaska, Fairhurst, Velicer, Velasquez and Rossi (1991) recognize that there is a cycling and recycling process

underlying cessation and that there are dimensions of change that require time, motivation and constancy. They propose that smokers go through different phases before completing the cessation process. As well, youth may make temporary quitting attempts, in response to external conditions, such as being away from school due to illness or vacation. These are methods to manage their use of tobacco, in contrast to permanent quit attempts (Balch, 1998). Thus, the lack of precision about cessation, due to the nature of the SHS question, may have contributed to the findings of the research. In other words, this study was not able to compare different stages of smoking cessation with school connectedness, since only one self-report question about quitting was used for this research project. Certainly, other research has found that there are frequent quitting and relapse cycles during adolescence, which may be important to address (Bonard, Janin-Jacquat & Michaud, 2001; Pallonen, Murray, Schmid, Pirie & Luepker, 1990).

Therefore, it was not possible to know what stage of cessation the female participants from the SHS were experiencing. Perhaps the concept of school connectedness may be more influential at a specific stage of cessation, or during a certain quit attempt. Even these attempts are important to recognize, as the adolescent literature suggests that repeat quitting efforts have been connected to successful cessation (Sussman, Dent, Severson, Burton & Flay, 1998). Consequently, perhaps after one month of cessation, any dependence or lifestyle concerns could be less relevant factors for the student. At this point, school connectedness could become more pertinent as she experiences cessation. Then she may become more focused on grades and homework, which in turn could motivate her to fulfill her cessation plan. Of interest, Ellickson, Tucker and Klein (2001) assessed smoking cessation based on having not smoked at all over the year, and found that the "female smokers were more likely to quit if they had stronger bonds with school" (p.193). Since the SHS was not able to capture the temporal aspect of cessation for the female participants, this could certainly impact the results of the present study.

Consequently, professionals need to assist adolescent females to cope with the absence of school connectedness, since this situation could be related to other concerns, such as depression. In view of this, Nutbeam et al., (1993) describe that school alienation may be "a measure of an adolescent's emotional health status rather than a fixed state" (p.25). Adolescents' response, to this lack of connection with one of the most essential institutions in their environment, may involve emotional reactions, as well as risky behaviors. Indeed, Fritz (2000) states that "female adolescents are more likely to experience stress than male adolescents are and may be more likely to smoke in order to cope" (p.301). Consequently, she may feel unhappy due to the alienation, and demonstrates this through her smoking behavior. When she begins to consider cessation, there are changes that will occur, and she will require new strategies to deal with the emotional and physical dependence on nicotine. Perhaps once the effects of cessation are stabilized and the mental health concerns are being dealt with, then the experience of school connectedness can be strengthened, so that school becomes a more positive experience for her.

***Limitations and Future Studies***

A number of limitations should be considered for this study. The SHS used the adolescents' self-report of quitting, which lead to a subjective interpretation of the question. As well, the survey did not differentiate on the basis of having quit a month long habit or a 12-month habit, a limitation noted by Thornton, Douglas and Houghton (1999). Thus, it is not possible to know what stage the participants quit behavior is at, which makes interpretation of the findings somewhat challenging. Future studies would benefit from having quitting behavior and quit attempts clearly outlined, so that the association of school connectedness could be expanded upon from this research study. Other researchers have agreed with this idea. Sargent, Mott and Stevens (1998) found that their limitation to "fully address the duration of cessation of tobacco use" compromised the clarity of quitting and relapse incidents (p.392). They suggested that adolescent cessation numbers could be overestimated, since some quitters could easily relapse. Thus, future studies could combine the quitting tobacco stages with longitudinal research so that any trends in school connectedness and cessation could be established, and long term quitters could be identified.

Also, this study was limited by the absence of a baseline of tobacco use for the participants. In contrast, Health Canada (2000) categorized former smokers as those who identified they had quit and agreed that they smoked at least 100 cigarettes in their lifetime, which allowed identification of the quitters that had used a substantial number of cigarettes. As well, by classifying the former smokers into short and long term quitters, Health Canada attempted to add a temporal aspect to their survey. This was completed by asking participants to respond to questions about when they had stopped smoking. Future studies could benefit from questions that define short and long-term abstainers, in order to review the impact of school connectedness with both these categories. Also, it is recommended that " smoking categories and definitions be standardized across Canada; this would facilitate easier and more meaningful comparisons, both longitudinal and with other provinces" (Akerstream, 1997, p.152). When survey questions become standardized, this can assist to ensure that validity and reliability across studies are achieved.

Another limitation was that the initial research was not gender specific, but pooled the data from males and females. For this particular project, only female data from the original survey was analyzed. As a result, the issue of gender was not a stratification variable, which Gritz, Nielsen and Brooks (1996) suggest should occur, whenever possible, with research designs for smoking cessation. They explain that "given the frequency with which gender is used as an explanatory or moderator variable, it was surprising to see how few studies conducted gender-specific data analyses" (p.35). Therefore, they recommend that more prospective and randomized studies using gender as a stratification variable are required. The hope is that differential trends that may be occurring for females will be identified (Faucher, 2003) as well as gender-specific theoretical models (Blake, Amaro, Schwartz & Flinchbaugh, 2001). Trends and models can help inform adolescent females' cessation, just as van Roosmalen and McDaniel (1992) so clearly state:

> Another myth that needs to be dispelled is that girls, once smokers, have a more difficult time quitting that do boys. This too, may be the result of smoking prevention being not only targeted at men (while claiming to be gender neutral), but based on a male model. The orientation of most smoking prevention programs is to help the individual resist peer pressure. In many ways, this is a kind of macho triumph of individual will over group influence, and as such may not be an attractive or viable option to many girls (p.91).

To be sure, understanding whether or not there are sex determinants of cessation assists with meeting the special needs of female smokers and has been suggested as an important area for further study (Ellickson, Tucker & Klein, 2001).

Quitting smoking has been described as "a cyclical process, in which environmental factors interact with smokers' characteristics at different stages of the cessation cycle" (Senore, Battista, Shapiro, Segnan, Ponti, Rosso & Aimar, 1998, p.412). Future research needs to recognize and magnify the impact of school connectedness for adolescents, since it is possible that this concept may have an effect during later quit attempts or once a student has achieved cessation. Even more specifically, Ershler et al., (1989) has suggested that future research could highlight the experiences that lead youth to resume smoking after a quit attempt and what they have learned from each attempt. It is possible that as students advance through cessation, factors such as grades and homework become more important, as well as their school attitude. These variables will assist students to further their education, and indeed, education attainment has been established as having an association with cessation (Breslau & Peterson, 1996; Chassin, Presson, Rose & Sherman, 1996; Khuder, Dayal & Mutgi, 1999).

Despite the limitations of this study, there are important conclusions that can be acknowledged. By finding an association between tobacco cessation and *attitude toward school* for adolescent females, this research has added to the previous findings that cessation and certain school factors are related. Also, this research has shown that there is potential to investigate school connectedness with specific quitting attempts or further along the process of cessation. Consequently, future studies need to address whether or not there is a complex relationship between adolescent females' cessation of tobacco and her experience of school connectedness. Adolescent females deserve the chance to engage with their school and to achieve success, as these experiences can be the foundation for their future. Further effort is warranted, because educational psychologists' perspectives on the relationship between academics and cessation can inform caregivers, teachers and other professionals, as well as foster the development of dynamic adolescent females.

## References

Alberta Alcohol and Drug Abuse Commission (AADAC), (2003). *The Alberta youth experience survey 2002: Summary report*. Edmonton, Alberta.

Alberta Alcohol and Drug Abuse Commission (AADAC), (2004). *Tobacco basics handbook: 2004 edition*. Edmonton, Alberta.

Akerstream, J. (1997). *Investigating smoking behavior and beliefs about smoking among Manitoba students aged 9-18 years*. (Master's thesis), University of Manitoba, Canada.

Backinger, C., & Leischow, S. (2001). Advancing the science of adolescent tobacco use cessation. *American Journal of Health Behaviors, 25*, 183-190.

Balch, G. (1998). Exploring perceptions of smoking cessation among high school smokers: Input and feedback from focus groups. *Preventive Medicine, 27*, A55-A63.

Blake, S., Amaro, H., Schwartz, P., & Flinchbaugh, L. (2001). A review of substance abuse prevention interventions for young adolescent girls. *Journal of Early Adolescence, 21*, 294-324.

Blitstein, J., Robinson, L., Murray, D., Klesges, R., & Zbikowski, S. (2003). Rapid progression to cigarette smoking among nonsmoking adolescents: Interactions with gender and ethnicity. *Preventive Medicine, 36*, 455-463.

Bonard, L., Janin-Jacquat, B., & Michaud, P. (2001). Who are the adolescents who stop smoking. *European Journal of Pediatrics, 160*, 430-435.

Breslau, N., & Peterson, E. (1996). Smoking cessation in young adults: Age at initiation of cigarette smoking and other suspected influences. *American Journal of Public Health, 86*, 214-220.

Burt, R., & Peterson, A. (1998). Smoking cessation among high school seniors. *Preventive Medicine, 27*, 319-327.

Charlton, A. (2000). Why are school-based, youth centred smoking interventions not as effective as we hoped: Some ideas for research. *International Journal of Health Promotion and Education, 38*, 124-128.

Chassin, L., Presson, C., Rose, J., & Sherman, S. (1996). The natural history of cigarette smoking from adolescence to adulthood: Demographic predictors of continuity and change. *Health Psychology, 15*, 478-484.

Chen, P-H., White, H., and Pandina, R. (2001). Predictors of smoking cessation from adolescence into young adulthood. *Addictive Behaviors, 26*, 517-529.

Colby, S., Tiffany, S., Shiffman, S., & Niaura, R. (2000). Are adolescent smokers dependent on nicotine? A review of the evidence. *Drug and Alcohol Dependence, 59*, 83-95.

Coulson, N., Eiser, C., & Eiser, J. (1997). Diet, smoking and exercise: Interrelationships between adolescent health behaviors. *Child: Care, Health and Development, 23*, 201-216.

Dalton, C. (1998). *Experimentation, initiation and maintenance of adolescent smoking behavior*. (Master's Thesis). Lakehead University, Canada.

DiClemente, C., Prochaska, J., Fairhurst, S., Velicer, W., Velasquez, M., & Rossi, J. (1991). The process of smoking cessation: An analysis of precontemplation, contemplation and preparation stages of change. *Journal of Consulting and Clinical Psychology, 59(2),* 295-304.

Donovan J., & Jessor, R. (1985). Structure of problem behavior in adolescence and young adulthood. *Journal of Consulting and Clinical Psychology, 53*, 890-904.

Donovan, J., Jessor, R., & Costa, F. (1991). Adolescent health behavior and conventionality-unconventionality: An extension of problem behavior theory. *Health Psychology, 10,* 52-61.

Dozois, D., Farrow, J., & Miser, A. (1995). Smoking patterns and cessation motivations during adolescence. *The International Journal of the Addictions, 30(11)*, 1485-1498.

Ellickson, P., Tucker, J., & Klein, D. (2001). Sex differences in predictors of adolescent smoking cessation. *Health Psychology, 20*, 186-195.

Ellickson, P., McGuigan, K., & Klein, D. (2001). Predictors of late-onset smoking and cessation over 10 years. *Journal of Adolescent Health, 29*, 101-108.

Engels, R., Knibbe, R., de Vries, H., & Drop, M. (1998). Antecedents of smoking cessation among adolescents: Who is motivated to change? *Preventive Medicine, 27*, 348-357.

Ershler, J., Leventhal, H., Fleming, R., & Glynn, K. (1989). The quitting experience for smokers in sixth through twelfth grades. *Addictive Behaviors, 14*, 365-378.

Faucher, M. (2003). Factors that influence smoking in adolescent girls. *Journal of Midwifery and Women's Health, 48*, 199-205.

Fleming, R., Leventhal, H., Glynn, K., & Ershler, J. (1989). The role of cigarettes in the initiation and progression of early substance abuse. *Addictive Behaviors, 14*, 261-272.

Fritz, D. (2000). Adolescent smoking cessation: How effective have we been? *Journal of Pediatric Nursing, 15(5)*, 299-306.

Fritz, D.(2003). *An intervention for adolescent smoking cessation.* (Dissertation). University of Missouri, USA.

Gritz, E., Nielsen, I., & Brooks, L. (1996). Smoking cessation and gender: The influence of physiological, psychological, and behavioral factors. *Journal of the American Medical Women's Association, 51*, 35-42.

Hansen, W., Collins, L., Johnson, C., & Graham, J. (1985). Self-initiated smoking cessation among high school students. *Addictive Behaviors, 10*, 265-271.

Hawkins, W. (1992). Problem behaviors and health enhancing practices of adolescents: A multivariate analysis. *Health Values, 16*, 46-54.

Health Canada (2000). Youth smoking in Canada. *Research*. Retrieved September 20, 2004, from www.hc-sc.gc.ca/hecs-sesc/tobacco/research/ctums/2000_youth/youth.html.

Health Canada (2001). Quitting smoking among youth. *Canadian Tobacco Use Monitoring Survey*. Retrieved September 20, 2004, from www.hc-sc.gc.ca/hecs-sesc/tobacco/research/ctums/2001/2001youth.html.

Health Canada (2002a). Improving the odds: Tobacco and young people - facts, forces and trends. *Resources for Professionals, 5*. Retrieved September 20, 2004, from www.hc-sc.gc.ca/hecs-sesc/tobacco/prof/youth/odds/odds023_c5.html.

Health Canada (2002b). Smoking in Canada: An overview. *Canadian Tobacco Use Monitoring Survey*. Retrieved September 20, 2004, from www.hc-sc.gc.ca/hecs-sesc/tobacco/research/ctums/2002/2002_overview.html.

Health Canada (2003). Summary results for 2003. *Canadian Tobacco Use Monitoring Survey*. Retrieved September 20, 2004, from www.hc-sc.gc.ca/hecs-sesc/tobacco/research/ctums/2003/summary_annual_2003.html.

Health Canada (2004). *Canadian Tobacco Use Monitoring Survey, Supplementary Table*. Retrieved September 20, 2004, from www.hc-sc.gc.ca/hecs-sesc/tobacco/research/ctums/2003/oz.html.

Horn, K., Fernandes, A., Dino, G., Massey, C., & Kalsekar, I. (2003). Adolescent nicotine dependence and smoking cessation outcomes. *Addictive Behaviors, 28,* 769-776.

Houston, T., Kolbe, L., & Eriksen, M. (1998). Tobacco-use cessation in the '90s-not adults only anymore. *Preventive Medicine, 27,* A1-A2.

Hu, T., Lin, Z. & Keeler, T. (1998). Teenage smoking, attempts to quit and school performance. *American Journal of Public Health, 88(6),* 940-943.

Huebner, A., Shettler, L., Matheson, J., Meszaros, P., Piercy, F., & Davis, S. (2005). Factors associated with former smokers among female adolescents in rural Virginia. *Addictive Behaviors, 30,* 167-173.

Jessor, R. (1987). Problem behavior theory, psychosocial development and adolescent problem drinking. *British Journal of Addiction, 82,* 331-342.

Johnson, J., Bottorff, J., Moffat, B., Ratner, P., Shoveller, J., & Lovato, C. (2003). Tobacco dependence: Adolescents' perspectives on the need to smoke. *Social Science and Medicine, 56,* 1481-1492.

Johnson, J., Kalaw, C., Lovato, C., Baillie, L., & Chambers, N. (2004). Crossing the line: Adolescents' experiences of controlling their tobacco use. *Qualitative Health Research, 14(9),* 1276-1291.

Jones, D., Schroeder, J., & Moolchan, E. (2004). Time spent with friends who smoke and quit attempts among teen smokers. *Addictive Behaviors, 29,* 723-729.

Khuder, S., Dayal, H., & Mutgi, A. (1999). Age at smoking onset and its effect on smoking cessation. *Addictive Behaviors, 24(5),* 673-677.

Leventhal, H., & Cleary, P. (1980). The smoking problem: A review of the research and theory in behavioral risk modification. *Psychological Bulletin, 88,* 370-405.

Lichtenstein, E., & Glasgow, R. (1997). A pragmatic framework for smoking cessation: Implications for clinical and public health programs. *Psychology of Addictive Behaviors, 11,* 142-151.

Lindsay, G., & Rainey, J.(1997). Psychosocial and pharmacological explanations of nicotine's "gateway drug" function. *Journal of School Health, 67(4),* 123-126.

Lloyd-Richardson, E., Papandonatos, G., Kazura, A., Stanton, C., & Niaura, R. (2002). Differentiating stages of smoking intensity among adolescents: Stage-specific psychological and social influences. *Journal of Consulting and Clinical Psychology, 70(4),* 998-1009.

Mothersill, K., McDowell, I., & Rosner, W. (1988). Subject characteristics and long term post-program smoking cessation. *Addictive Behaviors, 13*, 29-36.

Niaura, R., & Abrams, D. (2002). Smoking cessation: Progress, priorities and prospectus. *Journal of Consulting and Clinical Psychology, 70,* 494-509.

Nutbeam, D., Smith, C., Moore, L., & Bauman, A. (1993). Warning! Schools can damage your health: Alienation from school and its impact on health behavior. *Journal of Paediatrics and Child Health, 29* (1), 25-30.

O'Loughlin, J., Kishchuk, N., DiFranza, J., Tremblay, M., & Paradis, G. (2002). The hardest thing is the habit: A qualitative investigation of adolescent smokers' experience of nicotine dependence. *Nicotine and Tobacco Research, 4,* 201-209.

O'Callaghan, F., & Doyle, J. (2001). What is the role of impression management in adolescent cigarette smoking. *Journal of Substance Abuse, 13,* 459-470.

Orlandi, M. (1987). Gender differences in smoking cessation. *Women and Health, 11,* 237-251.

Orlando, M., Ellickson, P., & Jinnett, K. (2001). The temporal relationship between emotional distress and cigarette smoking during adolescence and young adulthood. *Journal of Consulting and Clinical Psychology, 69(6),* 959-970.

Pallonen, U., Murray, D., Schmid, L., Pirie, P., & Luepker, R. (1990). Pattern of self-initiated smoking cessation among young adults. *Health Psychology, 9*, 418-426.

Pederson, L., & Lefcoe, N. (1986). Change in smoking status among a cohort of late adolescents: Prediction and explanation of initiation, maintenance and cessation. *International Journal of Epidemiology, 15*, 519-526.

Perry C. & Staufacker M. (1996). Tobacco use. From DiClement, Hansen & Ponton (Eds.), *Handbook of Adolescent Risk Behavior* (53-81), New York: Plenum Press.

Pierce J.,& Gilpin, E. (1996). How long will today's new adolescent smoker be addicted to cigarettes. *American Journal of Public Health, 86(2),* 253-256.

Riedel, B., Robinson, L., Klesges, R., & McLain-Allen, B. (2002). What motivates adolescent smokers to make a quit attempt. *Drug and Alcohol Dependence, 68*, 167-174.

Rose, J., Chassin, L., Presson, C., & Sherman, S. (1996). Prospective predictors of quit attempts and smoking cessation in young adults. *Health Psychology, 15*, 261-268.

Sargent, J., Mott, L., & Stevens, M. (1998). Predictors of smoking cessation in adolescents. *Archives of Pediatric and Adolescent Medicine, 152*, 388-393.

Seguire, M., & Chalmers, K. (2000). Late adolescent female smoking. *Journal of Advanced Nursing, 31(6),* 1422-1429.

Senore, C., Battista, R., Shapiro, S., Segnan, N., Ponti, A., Rosso, S., & Aimar, D. (2001). Predictors of smoking cessation following physicians' counselling. *Preventive Medicine, 27,* 412-421.

Skinner, W., Massey, J., Krohn, M., & Lauer, R. (1985). Social influences and constraints on the initiation and cessation of adolescent tobacco use. *Journal of Behavioral Medicine, 8(4),* 353-371.

Soldz, S., & Cui, X. (2001). A risk factor index predicting adolescent smoking: A 7-year longitudinal study. *Psychology of Addictive Behaviors, 15,* 33-41.

Stanton, W., Lowe, J., & Gillespie, A. (1996). Adolescents' experiences of smoking cessation. *Drug and Alcohol Dependence, 43,* 63-70.

Stanton, W., & Smith, K. (2002). A critique of adolescent smoking cessation programs. *Journal of Adolescence, 25,* 427-438.

Stead, M., Hastings, G., & Tudor-Smith,C. (1996). Preventing adolescent smoking: A review of the options. *Health Education Journal, 55,* 31-54.

Stone, S., & Kristeller, J. (1992). Attitudes of adolescents toward smoking cessation. *American Journal of Preventative Medicine, 14,* 405-407.

Sunday S., & Folan, P. (2004). Smoking in adolescence: What a clinician can do to help. *Medical Clinics of North America, 88,* 1495-1515.

Sussman, S., Dent, C., Nezami, E., Stacy, A., Burton, D., & Flay, B. (1998). Reasons for quitting and smoking temptation among adolescent smokers: Gender differences. *Substance Use and Misuse, 33(14),* 2703-2720.

Sussman, S., Dent, C., Severson, H., Burton, D., & Flay, B. (1998). Self-initiated quitting among adolescent smokers. *Preventive Medicine, 27,* 19-28.

Thornton, W., Douglas, G.A., & Houghton, S.J. (1999). Transition through stages of smoking: The effect of gender and self-concept on adolescent smoking behavior. *Journal of Adolescent Health, 25,* 284-289.

Turbin, M., Jessor, R., & Costa, F. (2000). Adolescent cigarette smoking: Health related behavior or normative transgression. *Prevention Science, 1(3),* 115-124.

van Roosmalen, E., & McDaniel, S.(1992). Adolescent smoking intentions: Gender differences in peer context. *Adolescence, 27,* 87-105.

Vuckovic, N., Polen, M., & Hollis, J. (2003). The problem is getting us to stop: What teens say about smoking cessation. *Preventive Medicine, 37*, 209-218.

Waldron, I., & Lye, D. (1990). Relationships of teenage smoking to educational aspirations and parents' education. *Journal of Substance Abuse, 2*, 201-215.

Waldron, I., Lye, D., & Brandon, A. (1991). Gender differences in teenage smoking. *Women & Health, 17*, 65-90.

Wang, M., Fitzhugh, E., Eddy, J., & Westerfield, R. (1996). Attitudes and beliefs of adolescent experimental smokers: A smoking prevention perspective. *Journal of Alcohol and Drug Education, 41*, 1-12.

Wang, M., Fitzhugh, E., Green, B., Turner, L., Eddy, J., & Westerfield, R. (1999). Prospective social-psychological factors of adolescent smoking progression. *Journal of Adolescent Health, 24*, 2-9.

Wetter, D., Kenford, S., Smith, S., Fiore, M., Jorenby, D., & Baker, T. (1999). Gender differences in smoking cessation. *Journal of Consulting and Clinical Psychology, 67(4)*, 555-562.

Zhu, S., Sun, J., Billings, S., Choi, W., & Malarcher, A. (1999). Predictors of smoking cessation in U.S. adolescents. *American Journal of Preventive Medicine, 16(3)*, 202-207.

# CHAPTER 4

## Counselling Guidelines: a Practical Guide to Counselling the Adolescent Female Client and Creating Reconnection to her Authentic Self

*Act I Scene II*

*Adolescent girl enters the stage. She appears troubled and full of restless energy. Her body language is open and reflects her desire to engage with others, yet her attitude seems cautious and at times, dismissive. She begins to speak about herself...*

There are times when counselling an adolescent girl is analogous to a play. The drama and tension are high, the silences poignant, and emotions can be over the top or completely restrained. Sessions can feel like mysteries, thrillers, or even comedies and therapists are left wondering what will happen next. It is no wonder that many counsellors love to work with adolescents. However, mere interest and a positive perception of youth is not enough for young people to move towards healing, especially for those who are at risk for engaging in unhealthy and self-destructive behaviour.

In 2003, Alberta Alcohol and Drug Abuse Commission (AADAC) found that girls were more likely to smoke (18.2%) in contrast to boys (13.1%), which has implications for girls' health. American research from the Surgeon General's Report (2004) has revealed for the first time that smoking causes diseases in nearly every organ in the body and is linked to as a risk factor for both breast and cervical cancer. Also, the use of cigarettes has associations with other problem behaviors, including alcohol use and unsafe sexual activity (Turbin, Jessor & Costa, 2000).

In a report on sexual activity among Canadian women, the withdrawal method for preventing pregnancy was reportedly used at a significant rate by adolescent females aged 15-17 years old (Fisher & Boroditsky, 2000). Many young women reported that their first sexual experience occurred at age 13 or 14. Relationships between school, family communication and adolescent females' sexual behaviors have been explored. In studies by both Robinson (2004) and Thomson (2005), adolescent females' sexual and health related behaviors have implications for their academic and emotional health. Therefore, finding ways to foster positive decision-making in young women with regards to substances and sexuality could improve their short and long-term health practices.

Previous studies have demonstrated that there are relationships between tobacco use and school factors for adolescent females. As well, researchers are investigating potential associations with school variables, to assist adolescent females with their cessation efforts. Findings in these areas may inspire educators, counsellors and caregivers to acknowledge the potentially protective domain of school connectedness for youth with regards to tobacco use (Thomson, 2005). However, it may be even more beneficial for researchers to explore a multitude of ways to promote healthy behaviours in adolescent females and to examine how to strengthen the individual domain as well.

Given the findings from research by Robinson (2004) and Thomson (2005) and from previous experience working with adolescents, the authors intended to answer the following research questions:

1. Why do adolescent females go for counselling?
2. What is the best approach and why?
3. On what specific outcomes should counselling be based?

Oftentimes, it is easier for adolescents and their caregivers to recognize behavioural or externalized symptoms, rather than the internalized emotional distress. It is most likely that a variety of concerns will become indicators for professional intervention (Sears, 2004). Whether it is the issue of destructive behaviours or it is the adolescent herself who enters into counselling, the research indicates that therapeutic interventions are often beneficial (Kazdin, 2000; Weisz, Weiss, Han, Granger & Morton, 1995). An intervention that focuses on strengths in counselling may be an effective strategy when working with adolescent females and their smoking and sexual behaviours.

This paper builds upon our findings that for adolescent females, a positive relationship with school and family have been found to be associated with health-related behaviours (Robinson, 2004; Thomson, 2005). Focusing upon these areas, and other protective domains at the environmental and individual levels is suggested throughout this paper as an overall approach to working with adolescent females.

***Why Adolescent Females Disconnect from Themselves***

Loss or fragmentation of the self is a theme often discussed by authors when examining adolescent females' transition to womanhood (Brown & Gilligan, 1992; Iglesias & Cormier, 2002; Pipher, 1994). Many times positive aspects of the self become buried during adolescence when self-doubt and self-consciousness reign. Societal pressure to conform to certain set standards, along with pubertal biophysical developmental changes, can lead to transformations in the ways teen girls express their emotions, identify with their physical appearance, experience family and peer relationships, and act at school.

Pipher (1994) discusses how oftentimes during adolescence, girls "try on new roles every week – this week the good student, next week the delinquent and the next, the artist" (p.20). In addition, values and spirituality are often being explored by youth (Marcia, 1996). At the same time that adolescence can be a period of exploration of the self, for many young females, this period of growth often leads to a feeling of disconnection from the "authentic" self as the inner strengths can be shaken by the pressures of the outside world.

> Authenticity is an *owning* of all experience, including emotions and thoughts that are not socially acceptable. Because self-esteem is based on the acceptance of all thoughts and feelings as one's own, girls lose confidence as they *disown* themselves. They suffer enormous losses when they stop expressing certain thoughts and feelings (Pipher, 1994, p.38).

Cultural influences, such as the media, are often looked to for answers regarding the reasons that females' tend to develop critical attitudes towards their appearance and reject themselves. For example, Pipher discusses how eating disorders often become a problem for adolescent females as it is common for teenage girls to become more disappointed with their body shape in adolescence. This can be attributed to the North American cultural emphasis on physical perfection and females as sexual objects. "Anorexic young women tend to be popular with the opposite sex. They epitomize our cultural definitions of feminine: thin, passive, weak and eager to please" (p.175).

During the search to regain personal power and find ways to deal with the intensity of emotions that often accompany puberty, many females turn to physically destructive ways of coping with stress. The ratio of female adolescents with symptoms of depression is more than double that of young men (Nolen-Hoeksema & Girgus, 1994). According to Fritz (2000) "female adolescents are more likely to experience stress than male adolescents are and may be more likely to smoke in order to cope" (p.301). Therefore, the transition to adulthood can leave females operating at sub-optimal levels in regards to mental and physical health.

***Female Adolescent Health and Counselling***

The attempt to conform to society's ideals, along with adolescent tendencies to explore new identities and new ways of relating in the world are often viewed as an inevitable part of adolescence. Arnett (2000) reminds us that adolescence is "culturally constructed" due to the fast paced demographic changes of industrialized societies (p.470). Therefore, it seems reasonable to expect that many adolescent females will experience difficult times, but does adolescence have to be destructive to her health? Thus, if there is potential for stress, how can we teach adolescents to cope with it in acceptable ways? In order for young females to act healthy, whether it is taking care of their physical bodies or protecting their futures through academic success, they will likely need to reconnect to and to re-align with those positive aspects of who they were, who they are, and who they want to be.

Once females are reconnected to their inner strengths that are so often "shelved" or pushed aside in an attempt to fit the highly valued and restrictive social image of "feminine", they can explore ways to protect themselves from the often overwhelming external pressures. Counselling can bring awareness regarding the social strains that surround female clients and how they are impacted by their environment. Once they feel reconnected to their authentic selves and learn to embrace all aspects of themselves, it is then that they may feel inspired to consistently incorporate healthy ways for dealing with stress. From a strengths-based philosophy, while female adolescents enhance their coping behaviors and invest in themselves, inner work is necessary.

Research studies have found that a strengths-based philosophy is often more beneficial for these young women to learn to pave a path towards self-healing (Erkut, Fields, Sing & Marx, 1996; Saleeby, 1992; Spence, Sheffield & Donovan, 2002). Rather than

attempting to change the negative and unhealthy behaviours of at-risk adolescent females, some counsellors consider intervening with more productive and hopeful stories. For example, feminist psychotherapy, the narrative approach and solution-focused strategies keep the focus primarily on the inner strengths of their clients. When discussing the empirical benefits of this philosophy, Sharry (2004) states, "it is this *self-healing* process that a strengths-based approach to therapy aims to enhance" (p.10).

Thus, what are some things that counsellors, educators, and parents can do to effectively empower and support adolescent girls to go forward in health? In an attempt to answer this question, the following paragraphs are intended to assist professionals to re-attach female adolescents to their "authentic" selves so that they can become empowered to make healthy choices in a variety of present and future life situations.

***What Prompts Adolescents to go to Counselling?***

Youth that access counselling may be attending on their own initiative, or because of demands by their caregivers. At times youth are not inclined to reach out to others, which could reflect some inadequate social skills or special privacy needs. Also, accessing help from others can clash with their needs for autonomy and individuality (Oetzel & Scherer, 2003). Yet, for girls, there seems to be an inclination to convey their concerns more often than boys, "which may reflect social pressures to behave in sex-appropriate ways that intensify during adolescence for many youths" (Sears, 2004, p.402).

In addition, it has been proposed that these girls access substances or unhealthy behaviours as a way to manage distress, which in turn can become problematic (Sears, 2004). Therefore, the behaviours to cope with the internal stress become troublesome, which can lead to academic, relationship or family issues for the adolescent girl. At this point, counselling often becomes the option that is used to remedy these circumstances.

***Building the Counselling Relationship***

Research suggests that the success of therapy is based on certain common factors, including client factors, therapy techniques and the rapport that develops between the client and the professional (Hubble, Duncan & Miller, 1999). It is imperative that this joining of individuals become a "collaborative working relationship" and has become known as the "therapeutic alliance" (Ogrodniczuk, Piper, Joyce & McCallum, 2000, p.452). This joining will also assist with those clients who are resistant to counselling, which can occur more often for mandated adolescents. Clients that perceive an alliance tend to have more favourable results when assessed post-counselling, which is why this alliance becomes a factor when working with adolescent girls (Joyce, Ogrodniczuk, Piper & McCallum, 2003). These Canadian researchers (2000) suggest the following:

> ...explanations of the positive effect of the alliance on outcome often refer to beneficial common factors such as being involved in a helping relationship, hearing a convincing rationale, and receiving positive

> feedback about progress, which are believed to increase morale, a sense of mastery and positive expectations (p.456).

The achievement of the alliance seems to take place in phases, but the primary objective is to create the alliance at the beginning of counselling. As well, informing the adolescent and her caregivers at the beginning of therapy about the limits of disclosure will adequately prepare everyone about what is to be expected within the counselling process. This will also provide clarity regarding the extent of adolescent and caregiver participation throughout therapy. Therefore, in order for a positive relationship to develop between the counsellor and the adolescent, Horvath and Luborsky (1993) recommend:

> ...satisfactory levels of collaboration and trust must be established; the client needs to join the therapist as a participant in the therapeutic journey, agree on what needs to be accomplished and develop faith in the procedures that provide the framework for therapy (p.567).

What appears to be crucial for the alliance is that the client believes they have support and understanding to deal with their concerns. However, experienced clinicians know that empathy is the foundation, but not enough - youth also require a stance of non-judgment, so that they can feel safe to express themselves, regardless of the actions that brought them into counselling (Oetzel & Scherer, 2003). This objective stance can be difficult when the young woman is involved in at-risk behaviours, yet the need to discuss their internal motivations and intentions can be critical when addressing problem situations. Balancing cautions for limits on behaviours with support and education requires a creative clinician that is able to repair the therapeutic relationship if necessary (Horvath & Luborsky, 1993).

Research suggests that when a client anticipates they can be helped because they are going for counselling, this "expectancy" will influence the results of their therapy (Joyce, Ogrodniczuk, Piper & McCallum, 2003). With adolescent girls, this information is important because some of them will be the initiator of the decision to seek counselling. At the same time, other girls will be ambivalent or afraid to reach out for assistance, and this outlook may require a collaborative discussion about her views on counselling. Since this indirect expectancy effect can be mediated by the alliance, using the counselling relationship to develop her understanding of potential helpful outcomes can be beneficial (Joyce et al., 2003). Essentially, the more invested she is to receive relief from counselling, the more absorbed she will be in both the assignments for counselling and the alliance itself.

More important in counselling than being a 'hip' or 'cool' counsellor is genuineness and authenticity; youth may find this authenticity somewhat intriguing (Oetzel & Scherer, 2003, p.218). When the therapist takes ownership for their responses to the adolescent, the client is able to view herself through the lens of another, which is a tricky task when enmeshed in the egocentrism of youth. Using the skills of assertion in the early stages,

instead of confrontation or ultimatums, conveys a message so that "adolescents know their therapist is committed to treating the problem" (Oetzel & Scherer, 2003, p.218).

As well, Bratter, Bratter, and Bratter (1995) state that clinicians should aim to build a relationship with adolescent clients where the client can:

> ...rely on their therapist to help them chart their course and to know when and where waters might get rough, and they must trust that the clinician will take the helm if necessary, without taking over the ship. In the end, adolescents must see success as their own. The goal is not only to help them heal or recover but to build a foundation of self-confidence and resiliency in which empowerment replaces helplessness and isolation is replaced by connection (p.159).

***Get to Know Herself via Solution/Strengths-Based Therapy***

From a social constructionist point of view, "the aim of therapy is to move from narrow stories of problems and oppression to empowering stories of strength and hope and liberation, that fit equally well with the evidence of the clients' lives" (Sharry, 2004, p.5). Some examples of strengths-based orientations include Solution-Focused Therapy, Feminist Psychotherapy, and Narrative Therapy. Cognitive Therapy techniques also aim to change clients' internal dialogue. Solution-Focused Therapy supports the idea of small steps towards a positive client goal that can be accomplished by reframing the "problem" so that the client can create new meanings (O'Connell, 1998). The goals of Narrative Therapy, developed by Michael White and David Epston (1990), and Feminist Psychotherapy are rooted in a strengths-based approach that can be therapeutic for young female clientele.

These theories both support the notion of deconstructing and reconstructing ideas about the self through gentle examination of the social context (O'Connell, 1998; Payne, 2000; Worell & Remer, 2003). Through empathy and a curious stance, the counsellor can gather information around how the client has become who she is. By externalizing the "problem" identity that the client has personalized and holds for herself, the counsellor can assist the client in breaking this identity down to rebuild a "strengths-based" identity (White & Epston, 1990).

The following table summarizes the strengths-based philosophy of counselling that can also be applied to working with adolescent females:

**Table 4-1. Summary of Solution/Strength Approaches to Counselling.**

| SOLUTION FOCUSED |
|---|
| 1. Focuses on understanding how change occurs in clients' lives and what positive possibilities are open to them. |
| 2. Elicits detailed description of goals and preferred futures. |
| 3. Person is seen as more than the problem, with unique talents and strengths and a personal story to be told. |
| 4. Focuses on identifying 'what's right and what's working', on strengths, skills and resources in individuals, families and communities. |
| 5. Highlights and appreciates any time the client co-operates or goes along with the therapist's questions. |
| 6. Therapy can be brief in creating 'pivotal' change in clients' lives. |
| 7. Trauma is not necessarily predictive of pathology as it may weaken or strengthen the person. The therapist is interested in discovering how the client has coped with the trauma. |
| 8. Treatment plan is a collaborative endeavour between therapist and client, with their respective expertise. (Client as expert in their own lives and therapist as expert in therapeutic process). |

Adapted from Sharry (2004)

***Focus on Risk and Protective Factors***

AADAC (2003) has identified five areas that contain factors that interact to influence the behaviours of adolescents. These are the individual, peers, family, school and community. For example, within the school environment, youth will be more likely to be protected from negative behaviours when they experience school connection and high grades. They become more "at risk" for negative outcomes when they are likely to be leaving school early and are having school problems. These domains have consistently been identified as creating an arena of support for adolescent development.

Rather than examining the current "problems" the female may be experiencing, that is, dealing with only parts of who she is, it will likely be more therapeutic if counsellors find out about the "whole" client. Exploring the female client's world of peer and family relationships, school likes/dislikes, hobbies and interests, etc. can allow the therapist to gather important information about who the client is and can assist the counsellor and the client in the direction of her treatment needs. Once these risks and assets are identified for her client, a clinician can use this knowledge to interact with adolescent girls and to build a case conceptualization.

Since this strengths perspective is so valuable for understanding youth, it is advised that counsellors be aware of the research from this field (see De Jong & Miller, 1995). Initially, by educating adolescent females about their unique risks and assets and gaining insight of the meaning of the client's perspective, clients can become empowered to shift their perspectives so that healthier life decisions can be made. This information can be used to emphasize her adaptive functioning, which "facilitates adolescent girls viewing their world within context, rather than as personal failures" (Johnson, 2001, p.108).

This active construction of themselves and their environment can build social awareness, at a time when many girls are becoming interested in issues such as the environment, animal rights, and the influence of media, which are outside themselves/ beyond their inner world. This exploration of the different aspects of the client's life can aid counsellors and clients in seeing the "big picture". These interventions can build "resiliency characteristics" for her to use as buffers in challenging situations and environments (Bell, 2001). In addition, this process will likely make the client feel cared about and that her opinion matters. When it is communicated that the adolescent client's views and positive personal qualities are accepted and valued by the adult counsellor, the client may also begin to recognize, accept, and value these strengths herself.

Specialists also advise that clinicians become aware of the socioeconomic and cultural dimensions that influence adolescent girls within their communities (Johnson, 2001). Having cultural competence assists with the development of the therapeutic relationship and encourages girls to educate their counsellor, which leads to greater sharing and support. The exploration of these issues may lead to untapped protective factors such as spirituality or cultural resiliency (Querimit & Connor, 2003). For example, Aboriginal girls often experience marginalization and isolation within urban communities. Asking about her personal stories can create a narrative that articulates the "risk" domains she experiences; the strengths discovered can affect her outlook on herself, her family and her culture. As well, helping her resolve societal injustices through education and support leads to a greater understanding of her capacity to cope and decreases her personal responsibility for experiencing these injustices. When discussing ways to find the voice of adolescent females, Iglesias and Cormier (2002) advise that:

> A girl who will develop as a woman who embraces freedom has a strong sense of self-confidence and self-efficacy. She knows how to make friends, she respects and cares for her body, she knows what she thinks and feels, and she embraces the freedom to express her true self. She feels empowered in school and social situations. She recognizes and is able to challenge and resist situations of discrimination, oppression, and harassment, and she feels aligned with the positive aspects of her unique cultural heritage (p.266).

***Finding Health in Obscure Places***

Exploring how aspects of the self have evolved for the client may reveal whether some positive qualities are in "hiding", and are often unrecognized by society's standards.

Once these hidden qualities have once again been identified, the client and therapist can create goals for the future and the client can decide whether or not she would like to build upon these aspects of herself; that she might be unaware of or have unwittingly buried in response to the influential societal pressures.

In a qualitative study with high-risk Canadian youth regarding mental health and empowerment, Ungar and Teram (2000) found themes around the importance of social acceptance for these youth, and the need to feel personal power. They found that even though the behaviours of these youth are often labelled "unhealthy" from the outside, that their behaviours may actually be maintaining their mental health. Unfortunately, these coping mechanisms may be destructive to their physical health. Essentially, it is that these youth lack the resources to engage in physically healthy behaviours that maintain their mental health; that they are actually using what is accessible to them as a way to remain mentally healthy, even though their physical health may be impacted negatively. For example, the girl who identifies herself as the head of a female gang is using her leadership strengths to gain personal power, even though she is exposed to potentially harmful risks. These researchers suggest that counsellors should search for the health in even those behaviours that appear unhealthy to gain insight on the meaning the client holds for her current identity. Indeed, Vuckovic, Polen and Hollis (2003) comment that, "Counsellors who relate to teens and tap into the realities of the teen quitter's life can enhance support and diminish teens' concerns that counsellors are the smoking police" (p.216).

Empathic counselling seems an imperative part of this journey towards self-acceptance. Once the client and the counsellor reach a deeper understanding regarding these typically "unhealthy" behaviours, perhaps new behaviours can be introduced to serve a similar purpose for the client. Indeed, by helping adolescent females to create stories or narratives about their capacities, counsellors can create new avenues to challenge the problem behaviors. Also, by examining social influences and the external forces that contributed to the "problem" identity, the female client can take a breath from self-criticism and begin to explore herself from a less judgmental stance. "The process of deconstruction erodes the power of these dominant stories in the lives of those it touches. It makes it possible to highlight alternative meanings" (Seu & Heenan, 1998, p.32). Therefore, once youth become aware of their strengths and their assets, they may feel inspired to explore new ways of behaving in order to maximize these strengths on both a mental and a physical level.

***Introduce Healthy Ways for Coping with Stress: Using Creative Media and Exercise in Therapy***

Counsellors who use creativity in therapy with adolescent females can open several avenues for healing. Art, music, poetry, clay work, and journaling are just some of the ways in which adolescents can be engaged in therapy. Learning a variety of ways to effectively release and cope with emotions will equip young people with further tools for moving towards health. As well, for some, these forms of expression can be less direct and less threatening than verbal communication. For example, letter writing can be a

way for adolescents to communicate feelings regarding their life situations without speaking directly to their counsellor. Epston (1994) suggests exercises such as letter writing to the self to externalize the concerns and create links for clients to reach a new perspective on themselves. Other types of externalizing therapy include art therapy, which Ulman (2001) has described as:

> ...a means to discover both the self and the world, and to establish a relation between the two. In the complete creative process, inner and outer realities are fused into a new identity (p.22).

Teenage girls who are engaging in risky behaviours can be viewed as harming their physical bodies due to a lack of connection or lack of respect and education regarding their bodies. Connecting females to their physical bodies may be therapeutic, as there is so much rejection of the female body during these years. As the female body fills out and hips widen, for example, sometimes body image can become distorted due to the cultural messages around the value of female thinness.

Therapists can recommend exercise as part of therapy, but not necessarily with the intention that their clients lose weight. "Positive" reasons to exercise (such as for mood, health, enjoyment and fitness) have been linked with higher self-esteem, when compared to "negative" reasons (weight control and attractiveness) which have been associated with eating disorders and low self-esteem in adolescents (Furnham, Badmin & Sneade, 2002). Girls were also found to exercise for weight loss more than boys who exercised for body fitness. Challenging females' views by exploring the social messages around exercise and the female body may be helpful. Perhaps, introducing the idea that all of our parts are important and that they need to be cared for may lead to new ways of thinking about the body. An example of an exercise that aims towards integrating the mind and the body is yoga.

> By enabling us to go inward – to focus on how we *feel* in a pose rather than how we *look* – yoga encourages us to let go of our desires for our body and criticisms of it, to enjoy its movements. Over time, this experiential relationship with our body may even enable us to forsake the mirror for our internal seer, to filter out social pressures and unrealistic expectations, and to accept ourselves as we are (Isaacs, 2004, p.108).

As with other therapeutic goals, this process of introducing physical activity in therapy will likely be most successful when both the client and the counsellor collaboratively design the exercise goals. In addition, it is important that clients are referred to their physicians prior to starting a physical fitness regime. It may be worthwhile to review the literature when exploring useful strategies for introducing exercise as a therapeutic intervention (see Chung & Baird, 1999; Okonski, 2003).

***Connect Females to the Community***

Linking adolescents to adults in the community increases the support network of the youth. It may be beneficial to refer teens to resources such as career centres, volunteer and/or job opportunities, activities in the community and at school. These can also include referrals to school counsellors and health practitioners as they can further educate teens regarding substance abuse or sexual health, depending on the needs of the client. Adult mentoring may also be a path to consider if appropriate resources are available. Group counselling, family therapy, and social skills training can become other resources. These are potential strategies for teens to become more connected to additional supports and to gain important life skills.

By exploring the interests of the client, a collaborative plan can be devised with the aim of connecting to the community. Educating teens about what is available in their communities and connecting them with a variety of positive adult models is important. The more resources and encouraging people that are introduced to the adolescent, based on their strengths and needs, the more the pathways of health become visible. When adolescents become aware of the multitude of areas that they can draw from in the community, they may be better able to choose healthy ways to feel powerful and valuable.

***When Counselling Ends***

Awareness that counselling will be completed can be a therapeutic issue for both the client and therapist and it is important that this be addressed in order for successful completion of therapy. It is recommended that this event be reviewed on an on-going basis as a way to check in with progress and the successful completion of goals. The best case scenario is that, "therapy ends when the person decides that her self-story is rich enough to sustain her future" (Payne, 2000, p.17). It is up to us as counsellor to provide an environment where there are healthy boundaries and that endings are not understood as a negative occurrence, but as an opportunity for growth and transition. Payne states that the last meeting can be treated like a celebration, where confirmation for success can be recognized. Booster sessions can be scheduled at the penultimate session for the client to check in regarding resolution of the issues that brought her into counselling. Scheduling booster sessions can also increase motivation for attendance of the final session for those clients that are likely to avoid the discomfort of endings.

*Act II Scene I – Final Act*

*Adolescent stands tall, holding her head up high. Her eyes are bright and she is smiling. There is a light that seems to resonate from the inside out. She feels proud of who she is and is excited about her future. She catches a glimpse of herself in a mirror and appreciates what she sees, for she sees that every part of herself encompasses true beauty. She begins to treasure and invest in herself and acts in ways that reflect her inner peace. She no longer needs to search outside herself for validation, for she knows*

*how to tap into her strengths and provide herself with the nourishment she needs. Adolescent girl exits the stage.*

## References

Alberta Alcohol and Drug Abuse Commission (AADAC), (2003). *The Alberta youth experience survey 2002: Summary report*. Edmonton, Alberta.

Angold, A., Erkanli, A., Silberg, J., Eaves, L., & Costello, J. (2002). Depression scale scores in 8-17-year-olds: Effects of age and gender. *Journal of Child Psychology and Psychiatry, 43(8),*1052-1063.

Arnett, J. (2000). Emerging Adulthood: A theory of development from late teens through the twenties. *American Psychologist, 55(5),* 469-480.

Bell, C. (2001). Cultivating resiliency in youth. *Journal of Adolescent Health, 29,* 375-381.

Blum, R., McNeely, C., & Nonnemaker, J. (2002). Vulnerability, risk and protection. *Journal of Adolescent Health, 31S,* 28-39.

Brown, L., & Gilligan, C. (1992). *Meeting at the crossroads: Women's psychology and girls' development*. Harvard University Press.

Chung, B., & Baird, K.M. (1999). Physical exercise as a counselling intervention. *Journal of Mental Health Counseling, 21(2),* 124-136.

Erkut, S., Fields, J., Sing, R., & Marx, F. (1996). Diversity in girls' experiences: Feeling good about who you are. In B. Leadbeater & N. Way (Eds.), *Urban adolescent girls: Resisting stereotypes, creating identities* (pp.53-64). New York: New York University Press.

Epston, D. (1994). Extending the conversation, *Family Networker, November/December,* 31-39.

Fisher, W., & Boroditsky, R. (2000). Sexual Activity, contraceptive choice, and sexual and reproductive health indicators among single Canadian women aged 15-29: Additional findings from the Canadian contraception study. *The Canadian Journal of Human Sexuality, 9(2),* 79-93

Fritz, D. (2000). Adolescent smoking cessation: How effective have we been? *Journal of Pediatric Nursing, 15(5),* 299-306.

Furnham, A., Badmin, N., & Sneade, I. (2002). Body image dissatisfaction: Gender differences in eating attitudes, self-esteem, and reasons for exercise. *The Journal of Psychology, 136(6),* 581-596.

Horvath, A., & Luborsky, L. (1993). The role of the therapeutic alliance in psychotherapy. *Journal of Consulting and Clinical Psychology, 61(4),* 561-573.

Iglesias, E., & Cormier, S. (2002). The transformation of girls to women: Finding voice and developing strategies for liberation. *Journal of Multicultural Counseling and Development, 30*, 259-271.

Isaacs, N. (2004). Positive i.d. *Yoga Journal, May/June*, 108.

Johnson, N. (2001). Psychotherapy partnership approach with adolescent girls. *Women and Therapy, 23*, 105-121.

Johnson, N. (2003). On treating adolescent girls: Focus on strengths and resiliency in psychotherapy. *Journal of Clinical Psychology, 59(11)*, 1193-1203.

Joyce, A., Ogrodniczuk, J., Piper W., & McCallum M. (2003). The alliance as mediator of expectancy effects in short-term individual therapy. *Journal of Consulting and Clinical Psychology, 71(4)*, 672-679.

Kazdin, A. (2000). Developing a research agenda for child and adolescent psychotherapy. *Archives of General Psychiatry, 57*, 829-840.

Marcia, J. (1966). Development and validation of ego identity status. *Journal of Personality and Social Psychology, 3*, 366-383.

Nolen-Hoeksema, S., & Girgus, J. (1994). The emergence of gender differences in depression during adolescence. *Psychological Bulletin, 115(3)*, 424-443.

O'Connell, B. (1998). *Solution-focused therapy*. London: Sage Publications.

Oetzel, K., & Scherer, D. (2003). Therapeutic engagement with adolescents in psychotherapy. *Psychotherapy: Theory, Research, Practice, Training, 40(3)*, 215-255.

Ogrodniczuk, J., Piper, W., Joyce, A., & McCallum, M. (2000). Different perspectives of the therapeutic alliance and therapist technique in 2 forms of dynamically oriented psychotherapy. *Canadian Journal of Psychiatry, 45(5)*, 452-459.

Okonski, V. (2003). Exercise as a counselling intervention. *Journal of Mental Health Counseling. 25(1)*, 45-57.

Payne, M. (2000). *Narrative therapy: An introduction for counsellors*. London: Sage Publications.

Pipher, M. (1994). *Reviving Ophelia: Saving the selves of adolescent girls*. New York: Ballantine Books.

Querimit, D. & Connor, L. (2003). Empowerment psychotherapy with adolescent females of color. *Journal of Clinical Psychology, 59(11),* 1215-1224.

Robinson, C. (2004). *School, family, and adolescent females' sexual behaviour: An exploration of protective factors and counselling strategies.* (Master's Thesis) University of Alberta, Canada.

Saleeby, D. (1992). *The strengths perspective in social work practice.* White Plains, NY: Longman Inc.

Sears, H. (2004). Adolescents in rural communities seeking help: Who reports problems and who sees professionals. *Journal of Child Psychology and Psychiatry, 45(2),* 396-404.

Seu, I., & Heenan, M. (1998). *Feminism and psychotherapy: Reflections on contemporary theories and practices.* (Eds.). London: Sage Publications.

Sharry, J. (2004). *Counselling children, adolescents, and families: A strengths-based approach.* London: Sage Publications Ltd.

Spence, S., Sheffield, J., & Donovan, C. (2002). Problem-solving orientation and attributional style: Moderators of the impact of negative life events on the development of depressive symptoms in adolescence? *Journal of Clinical Child and Adolescent Psychology, 31 (2),* 219-229.

Thomson, J. (2005). *Tobacco use, school experiences and counselling guidelines: Exploring themes of connection for adolescent females.* (Master's Thesis), University of Alberta, Canada.

Turbin, M., Jessor, R., & Costa, F. (2000). Adolescent cigarette smoking: Health related behavior or normative transgression. *Prevention Science, 1(3),* 115-124.

Ulman, E. (2001). Art therapy: Problems of definition. *American Journal of Art Therapy, 40(1),* 16-27.

Ungar, M., & Teram, E. (2000). Drifting toward mental health: High-risk adolescents and the process of empowerment. *Youth and Society, 32(2),* 228-252.

U.S. Department of Health and Human Services. (2004). New surgeons general's report expands list of diseases caused by smoking. *Surgeon General's Report,* Retrieved September 17, 2004, from www.hhs.gov/news/press/2004pres/20040527a.html.

Vuckovic, N., Polen, M., & Hollis, J. (2003). The problem is getting us to stop: What teens say about smoking cessation. *Preventive Medicine, 37,* 209-218.

Weiland Bowling, S., Schindler Zimmerman, T., & Carlson Daniels, K. (2000). "Empower": A feminist consciousness-raising curriculum for adolescent women. *Journal of Child and Adolescent Group Therapy, 10(1),* 3-28.

Weisz, J., Weiss, B., Han, S., Granger, D., & Morton, J. (1995). The effects of psychotherapy with children and adolescents re-visited: A meta-analysis of treatment outcome studies. *Psychological Bulletin, 117,* 450-468.

White, M. & Epston, D. (1990). *Externalizing the problem*: *Narrative means to therapeutic ends.* New York: W.W. Norton.

Worell, J. & Remer, P. (2003). *Feminist perspectives in therapy: Empowering diverse women (2nd ed.).* Hoboken, N.J.: John Wiley and Sons.

# CHAPTER 5

## Summary and Research Findings

### Tobacco Use, School Experiences and Counselling Guidelines: Exploring Themes of Connection for Adolescent Girls

In the following chapter, research findings are briefly summarized and future considerations are explored. Implications for adolescent females are reviewed, to continue to focus on understanding their use of tobacco and their requirements for cessation. In addition, a discussion on school connectedness is provided to outine possible ways to support the achievements of adolescent females.

#### *Paper 1: What is the Association between Self-Reports of Tobacco Use and the Experience of School Connectedness for Adolescent Females?*

The purpose of this paper was to contribute to the research on adolescent female health behaviors. By focusing on aspects of school connectedness, I wanted to know if this concept would be associated with adolescent females' self-reported tobacco use. The results from a survey given to 274 female students were used for this study. School connectedness was measured by adolescent females' attitude toward school, estimated grades, and average time spent on homework and on studying. Tobacco use was measured on a continuum with nonsmoking, rare smoking, occasional and regular smoking categories. Statistical analysis was performed with the chi-square tests of association.

The results of this study indicated that the adolescent females who reported they had higher rates of tobacco use could experience school connectedness differently than the other female participants. Indeed, for the participants that defined themselves as regular smokers, significant inverse associations were found with the variables *attitude toward school, estimated grades* and *time spent on homework*. In this study, there was no significant association with time spent on studying. These findings appear to endorse the literature review that described the relationships between school factors and tobacco use for adolescents.

Based on the outcome of this study, continued research with adolescent females and their sense of school connectedness is necessary. Use of tobacco by female smokers is related to these adolescents' apparent alienation from school and their studies, and this phenomenon deserves further attention. Of note, "clearly the evidence suggests that the risky behaviors of the adolescent girl may have lifelong consequences in terms of future physical and reproductive health, emotional well-being, and social outcomes, such as educational and occupational achievement" (Sarigianai, Ryan & Petersen, 1999, p.116).

### *Paper 2: Will There be an Association between Cessation of Tobacco and the Experience of School Connectedness for Adolescent Females?*

Since the results of the first paper demonstrated that the regularly smoking adolescent females could have a different sense of school connectedness, I wondered what would happen to school connectedness for the adolescent girls that quit tobacco. Therefore, the participants that reported they were former smokers were contrasted with the occasional and regular users of tobacco. I choose to use data from both these smokers, since behavioral and academic problems are possible with experimenting and committed smokers (Ellickson, Tucker & Klein, 2001). Also, adolescents can underestimate their tobacco use, since it is an illegal and often undesirable activity, so I wanted to capture all the participants that were actively smoking. Statistical analysis was performed with the chi-square tests of association.

The results of this study indicated that for the former smokers, the variable *attitude toward school* was statistically significant. The other variables that were chosen to represent school connectedness (approximate grades, time spent on homework and studying) were not significant. Speculations are that the adolescent females' self-reported success at cessation has positive consequences that impact her beliefs about her school. It has been suggested that there are underlying dimensions of motivation and self-efficacy that influence the quitting process (Lichtenstein and Glasgow, 1997). Perhaps these aspects of her personality have generated both her school attitude and approach to quitting smoking, after all, she would have experienced these qualities to attempt cessation.

Focusing on the school factors that may impact female adolescent former smokers are important, due to the lack of research on gender and cessation (Fritz, 2000). Also, aspects that may assist cessation strategies, such as school connectedness, may become important allies for adolescent females. Researchers are suggesting that adolescents may attempt to quit using tobacco in phases, therefore understanding if her academic and school attitude impacts this process are worthy areas for future study.

### *Paper 3: Counselling Guidelines: a Practical Guide to Counselling the Adolescent Female Client and Creating Reconnection to her Authentic Self*

This final paper was written in collaboration with Cathy Robinson (MEd. Candidate), in order to clarify how counsellors can connect with female adolescents who are involved with health-risk behaviors. It was an opportunity for us to draw upon our ideas from both personal experience and our counselling classes and create a practical guide. Counselling interventions are often beneficial for adolescent girls, as a source to encourage positive choices for her present and her future.

Counsellors can encourage adolescent females to incorporate healthier methods to deal with stress, unhappiness and disconnection, and build upon their resiliency to resist tobacco. The process of recognizing how her lifestyle impacts her, and learning to value herself, is often started within the context of a supportive alliance with the counsellor. As

well, focusing on the protective effects of school connectedness and community resources can assist female adolescents to make choices that benefit their needs. This counselling guide views the adolescent female client as an individual with strengths and solutions, and promotes orienting her toward health enhancement within her own cultural, academic and familial circumstances.

## Final Thoughts

*My Theme for this Thesis is Connection - to Self and to School*

I chose to use the word connection in the title for this thesis, as I believe this is a remarkable theme in the lives of adolescent girls. Feminist researchers have been commenting on the needs of connection for years, for instance, Carol Gilligan has written that "problems in girls' adolescent development are problems of connection" when she describes the struggles of young women (1990, p.10).

Throughout this project, as I learned about the girls and their relationship with tobacco, I realized that they were trying to connect to something outside of themselves, perhaps due to disconnection within themselves. Adolescence is the time when females are trying to find their voice, and their place, and make choices so that they can express themselves fully. They may have ideas or desires that feel confusing to them and may even contradict what others want. Yet at the same time, they still want to feel as if they belong. And often, they do not have the skills to resolve conflict and stay connected, to themselves and to others who they care about.

It appears from my project that some girls are not experiencing connection to their school, which may leave them feeling unhappy or stressed or inadequate, and they search for ways to cope. They will require incidents of empowerment and belonging, in order to address the school disconnection. For some, it seems that their choice to be with tobacco is a way to link up with peers and to find an identity that satisfies. Therefore, "cigarettes can serve both as personal and social supports" and acquire meaning for adolescents because of their supportive role (O'Loughlin, Kishchuk, DiFranza, Tremblay & Paradis, 2002, p.207). For some, their cigarettes are reliable, cooperative and are able to provide a sense of control, in a school environment where adolescent females are mandated to attend and follow rules.

How can we help the adolescent girls who are also struggling with their connection to their school, and their academic experience? It would be great if schools could become the place where girls felt empowered and connected, instead of disempowered and disconnected. For example, if girls could become empowered to comment about their school experiences, in appropriate and effective ways, this could represent an expression of their voice. Thus, if the girls that are using tobacco are disconnected from their schools and unhappy with aspects of school work, allowing them to provide feedback to teachers, or choose most of their curriculum or participate in school committees could affect their sense of purpose within themselves and their school (Graham, 2004). Indeed,

youth "who are able to participate and resume responsibility both within and outside the school environment are for more likely to enjoy their school experience" (Nutbeam, Smith, Moore & Bauman, 1993, p.29). If adolescent females were encouraged to speak out about the quality of their education, and provide feedback about areas to improve, perhaps they may experience further connection to their school.

Counsellors understand that when individuals cannot speak about their experiences, then they use behaviors to ensure that others know about their reactions. Certainly many students that are not achieving in school are frustrated, but it is unfortunate when they resort to health-risk behaviors such as tobacco use to demonstrate to others about their unhappiness. Therefore, the counselling guide that was written by Cathy Robinson and myself was about *connecting* with adolescent girls, through the development of the counselling relationship and by valuing them as individuals with personal strengths. When schools, teachers, caregivers, friends and professionals can connect with girls, and allow them to have their voice and to express their needs, then we are all inspiring adolescent females to develop innovative ways, other than tobacco, to reflect upon themselves and their need for connection.

## References

Ellickson, P., Tucker, J., & Klein, D. (2001). Sex differences in predictors of adolescent smoking cessation. *Health Psychology, 20,* 186-195.

Fritz, D. (2000). Adolescent smoking cessation: How effective have we been? *Journal of Pediatric Nursing, 15(5),* 299-306.

Gilligan, C., Lyons, N., & Hanmer, T. (1990). *Making connections: The relational world of adolescent girls at Emma Willard School.* Harvard University Press.

Graham, P. (2004). *The end of adolescence.* Oxford University Press.

Lichtenstein, E., & Glasgow, R. (1997). A pragmatic framework for smoking cessation: Implications for clinical and public health programs. *Psychology of Addictive Behaviors, 11,* 142-151.

Nutbeam, D., Smith, C., Moore, L., & Bauman, A. (1993). Warning! Schools can damage your health: Alienation from school and its impact on health. *Journal of Paediatrics and Child Health, 29(1),* 25-30.

O' Loughlin, J., Kishchuk, N., DiFranza, J., Tremblay, M., & Paradis, G. (2002). The hardest thing is the habit: a qualitative investigation of adolescent smokers' experiences of nicotine dependence. *Nicotine and Tobacco Research, 4,* 201-209.

Sarigianai, P., Ryan, L., & Petersen, A. (1999). Prevention of high-risk behaviors in adolescent women. *Journal of Adolescent Health, 25,* 109-119.

# Appendix

## Instrument

*STUDENT HEALTH SURVEY*

# Questionnaire

**Introduction and Directions**

This questionnaire is completely **anonymous** and **voluntary**. We are interested in your dating experiences as well as your impressions of the dating habits of other teens. **We really want honest answers to the questions, but please feel free to skip any questions that you do not want to answer.** Your participation in this survey will help us better understand the dating trends of today's teenagers, and will help us make the CALM course more relevant to teenagers' needs. Thank you for your participation.

Questions used in the current research study are highlighted on the following pages: 93 and 94

**Part 1 – Background Information**

1. What is your sex (gender)?

   (1) male (2) female

2. What is your age?

   (1) 14
   (2) 15
   (3) 16
   (4) 17
   (5) 18
   (6) 19 or older

3. What grade are you in ?

   (1) 10 (2) 11 (3) 12

4. What is your cultural background?

   (1) European Please Specify:_____
   (2) Native
   (3) Other

5. Please indicate the statement about religion which best describes you.

   (1) I never go to church
   (2) I rarely go to church
   (3) I sometimes go to church, but not regularly
   (4) I regularly go to church, usually once a week
   (5) I regularly go to church, and am involved in religious activities during the week as well

6. Do you consider yourself religious?
   (1) Not at all
   (2) Less religious than most teens my age
   (3) More religious than most teens my age
   (4) Yes, very
   (5) Other_____(write in)

7. Please mark the statement which, in your opinion, best describes your physical appearance.
   (1) I do not consider myself attractive to others
   (2) I am not really attractive, but I do have some nice features
   (3) I think that I am average in attractiveness

(4) I think I am more attractive than others
(5) I consider myself one of the most attractive people in my school
(6) Other_____(write in)

8. Where do you live?
   (1) in a city (3) on a reserve (5) Other_____
   (2) on an acreage (4) on a farm

9. Do you have access to a vehicle to drive, either your own, or your parents?
   (1) I am not old enough to drive
   (2) Yes
   (3) No
   (4) Sometimes

10. Please mark the statement which best describes your parents/guardians:
   (1) I live with both of my biological parents
   (2) I live with my mother who is a single parent
   (3) I live with my father who is a single parent
   (4) I live with my mother and stepfather
   (5) I live with my father and a stepmother
   (6) Other_____(write in)

11. Please mark the statement which best describes the parents or guardians you are currently living with:
   (1) My parents/guardians are very strict
   (2) My parents/guardians are strict
   (3) My parents/guardians are not very strict

12. Please mark the statement which best describes the parents or guardians you are currently living with:
   (1) I have a good relationship with both my parents/guardians, (or with one parent if living with a single parent)
   (2) I get along with my mother/stepmother, but not with my father/stepfather
   (3) I get along with my father/stepfather, but not with my mother/stepmother
   (4) I do not have a good relationship with either of my parents/guardians, (or one parent if living with a single parent)

13. Have you ever talked to your parents about sex?
   (1) yes, a great deal
   (2) yes, a bit
   (3) no, not at all

**14. Do you like school?**

**(1) I love school**
**(2) I like school more than most of my friends**
**(3) It's OK (average)**
**(4) I don't like school very much**
**(5) I hate school**
**(6) Other_____(write in)**

15. Do you participate in extra-curricular activities?

(1) Yes, as much as I can
(2) Yes, a little
(3) I don't participate in extra-curricular activities

16. Do you have chores to do after school?

(1) Yes, I have regular chores to do after school
(2) Yes, I sometimes have chores to do but not everyday
(3) No, I don't have chores to do after school

17. Do you have a job after school?

(1) Yes, I have a regular paid job
(2) I sometimes do odd jobs for money but nothing regular
(3) I do not have any job for money

18. How many hours per week, on average, do you work during the school year?

(1) I do not have a job
(2) 1 to 5 hours
(3) 6 to 10 hours
(4) 11 to 15 hours
(5) more than 15 hours

**19. How much time, on average, do you spend doing homework each week?**

**(1) None**
**(2) Less than one hour**
**(3) 1-2 hours**
**(4) 3-5 hours**
**(5) More than 5 hours**

**20. How much time, on average, do you spend studying each week?**

**(1) None**
**(2) Less than one hour**
**(3) 1-2 hours**
**(4) 3-5 hours**
**(5) More than 5 hours**

21. What are your plans immediately after completing high school?

(1) continue my education at a university
(2) continue my education at a college with the intention of transferring to a university after one or two years

(3) continue my education at a college (e.g., NAIT, Grant MacEwan)
(4) to get a job
(5) to travel
(6) I don't know yet
(7) Other_____(write in)

22. What career, or job, do you intend to pursue when you finish your education?
(1) _____(write in)
(2) I don't know yet

**23. What is your approximate grade average in school?**
**(1) less than 40%** **(3) 50-65%** **(5) 80 to 100%**
**(2) 40-50%** **(4) 65-80%**

**24. Which statement best describes your use of tobacco?**
**(1) I never have used any tobacco products**
**(2) I have rarely smoked or chewed tobacco**
**(3) I am an occasional smoker (or chewer) of tobacco**
**(4) I used to use tobacco products, but have quit**
**(5) I smoke (or chew) tobacco regularly**

25. Which statement best describes your use of alcohol?
(1) I never drink alcoholic beverages
(2) I used to drink alcohol, but I have quit
(3) I occasionally drink alcoholic beverages
(4) I drink alcohol regularly, but don't usually get drunk
(5) I drink alcohol regularly, and often get drunk

26. How many alcoholic drinks would you have in an average week?
(1) I don't drink alcoholic beverages
(2) 1-3 drinks / week
(3) 4-6 drinks / week
(4) 7-10 drinks / week
(5) more than 10 drinks / week

27. When do you drink alcoholic beverages? (You may choose more than one).
(1) I don't drink alcoholic beverages
(2) Only at family functions
(3) Only at parties on the weekends
(4) Only on weekends
(5) Sometimes during the week, as well as weekends
(6) I drink alcoholic beverages during the week and on weekends

28. Have you ever used illegal drugs?
    (1) Never
    (2) Only a few times (less than 5)
    (3) Occasionally (less than 10)
    (4) Frequently

29. Have you ever used prescription drugs or "over-the-counter" drugs, for recreational (non-medical) reasons?
    (1) never
    (2) only a few times
    (3) occasionally
    (4) frequently

Thank you. Please go on to Part 2.

**Part 2 – Peer Expected Dating Behaviors**

This part of the questionnaire asks you to think about the **majority** of the teens in your school, and to **predict what you think** most of them would do while on a date.

To help you with this portion of the survey, a brief definition of the terms used has been given below:

**Date:** when a boy and a girl plan to meet alone or in a group at some place at some time
**Going steady:** going out with only one person, in a mutually exclusive relationship
**Kissing:** casual kissing, once or twice on a date
**Necking:** more prolonged kissing, with cuddling and stroking of the hair and face
**Light petting:** fondling of the body with the hands
**Heavy petting:** prolonged fondling, often with the removal of clothing
**Sexual intercourse:** full sexual relations (go all the way)

1. Two people like each other, and are on a **first date**:

If two people who liked each other, and are on a first date, would you expect them to...

| | Yes | No | Not sure |
|---|---|---|---|
| (1) hold hands? | 1 | 2 | 3 |
| (2) kiss? | 1 | 2 | 3 |
| (3) neck? | 1 | 2 | 3 |
| (4) light pet? | 1 | 2 | 3 |
| (5) heavy pet? | 1 | 2 | 3 |
| (6) "go all the way"? | 1 | 2 | 3 |

2. Two people who have **gone out several times**:

If two people have gone out several times as a couple, would you expect them to...

| | Yes | No | Not sure |
|---|---|---|---|
| (1) hold hands? | 1 | 2 | 3 |
| (2) kiss? | 1 | 2 | 3 |
| (3) neck? | 1 | 2 | 3 |
| (4) light pet? | 1 | 2 | 3 |
| (5) heavy pet? | 1 | 2 | 3 |

| | | | |
|---|---|---|---|
| (6) "go all the way"? | 1 | 2 | 3 |

3. A couple that is **going steady**:
If a couple were going steady, would you expect them to...

| | Yes | No | Not sure |
|---|---|---|---|
| (1) hold hands? | 1 | 2 | 3 |
| (2) kiss? | 1 | 2 | 3 |
| (3) neck? | 1 | 2 | 3 |
| (4) light pet? | 1 | 2 | 3 |
| (5) heavy pet? | 1 | 2 | 3 |
| (6) "go all the way"? | 1 | 2 | 3 |

4. A couple that is in a **serious, committed relationship**:

If a couple were seriously thinking about marriage, or were in a deep, committed relationship, would you expect them to...

| | Yes | No | Not sure |
|---|---|---|---|
| (1) hold hands? | 1 | 2 | 3 |
| (2) kiss? | 1 | 2 | 3 |
| (3) neck? | 1 | 2 | 3 |
| (4) light pet? | 1 | 2 | 3 |
| (5) heavy pet? | 1 | 2 | 3 |
| (6) "go all the way"? | 1 | 2 | 3 |

Thank you. Now go on to Part 3

**Part 3 – Actual Dating Behaviours**
These questions are intended to gather information about behaviours of young Canadians while on dates. We are interested in **your** experiences. Please give us your honest answers. **Again, you may leave out any question(s) which you feel you would rather not answer.**

To assist you with this portion of the survey, a brief definition of the terms used has been given below:

**Date:** when a boy and a girl plan to meet alone or in a group at some place at some time
**Going steady:** going out with only one person, in a mutually exclusive relationship
**Kissing:** casual kissing, once or twice on a date
**Necking:** more prolonged kissing, with cuddling and stroking of the hair and face
**Light petting:** fondling of the body with the hands
**Heavy petting:** prolonged fondling, often with the removal of clothing
**Sexual intercourse:** full sexual relations (go all the way)

I. While on a **first date** with someone:

1. Have you ever been on a date with a person of the opposite sex? (See definition of "date" above).
   (1) Yes (2) No

2. How many different people of the opposite sex have you ever dated?
   (1) I have never been on a date
   (2) I have only dated one person
   (3) I have dated a few people (up to 5)
   (4) I have dated more than 5 people

3. On any of the first dates with someone you liked did you ever? (Choose Yes, No, or Not sure for all 6 categories or check #7)

| | Yes | No | Not sure |
|---|---|---|---|
| (1) hold hands? | 1 | 2 | 3 |
| (2) kiss? | 1 | 2 | 3 |
| (3) neck? | 1 | 2 | 3 |
| (4) light pet? | 1 | 2 | 3 |
| (5) heavy pet? | 1 | 2 | 3 |

(6) "go all the way"? 1 2 3
(7) I have never been on a date

II. After **going out several times** with one person:

1. Have you ever had several dates with the same individual of the opposite sex?
   (1) Yes (2) No

2. How many different people of the opposite sex have you ever had several dates with?
   (1) I have never been on a date
   (2) I have only been on more than one date with one person
   (3) I have been on more than one date with several people (up to 5)
   (4) I have been on more than one date with more than 5 people

3. After several dates with the same person did you ever....?
(Choose Yes, No, or Not sure for all 6 categories or check #7)

| | Yes | No | Not sure |
|---|---|---|---|
| (1) hold hands? | 1 | 2 | 3 |
| (2) kiss? | 1 | 2 | 3 |
| (3) neck? | 1 | 2 | 3 |
| (4) light pet? | 1 | 2 | 3 |
| (5) heavy pet? | 1 | 2 | 3 |
| (6) "go all the way"? | 1 | 2 | 3 |

(7) I have never been on several dates

III. While **going steady:**

1. Have you ever gone steady with a person of the opposite sex?
   (1) Yes (2) No

2. How many different people of the opposite sex have you ever gone steady with?
   (1) I have never gone steady
   (2) I have only gone steady with one person
   (3) I have gone steady with several people (up to 5)
   (4) I have gone steady with more than 5 people

3. While going steady with someone of the opposite sex did you ever?

(Choose Yes, No, or Not sure for all 6 categories or check #7)

| | Yes | No | Not sure |
|---|---|---|---|
| (1) hold hands? | 1 | 2 | 3 |
| (2) kiss? | 1 | 2 | 3 |
| (3) neck? | 1 | 2 | 3 |
| (4) light pet? | 1 | 2 | 3 |
| (5) heavy pet? | 1 | 2 | 3 |
| (6) "go all the way"? | 1 | 2 | 3 |

(7) I have never gone steady

IV. While in a **serious, committed relationship**:

1. Have you ever been in a serious, committed relationship:
   (1) Yes (2) No

2. While in a serious, committed loving relationship with someone of the opposite sex did you ever?
   (Choose Yes, No, or Not sure for all 6 categories or check #7)

| | Yes | No | Not sure |
|---|---|---|---|
| (1) hold hands? | 1 | 2 | 3 |
| (2) kiss? | 1 | 2 | 3 |
| (3) neck? | 1 | 2 | 3 |
| (4) light pet? | 1 | 2 | 3 |
| (5) heavy pet? | 1 | 2 | 3 |
| (6) "go all the way"? | 1 | 2 | 3 |

(7) I have never been in a serious, committed relationship

Thank you. Please go on to Part 4.

**Part 4 – Sexual Attitudes and Behaviour**

The following questions deal with your sexual attitudes and behaviour. (please remember that your answers are totally confidential and voluntary). **No one will ever know what your particular answers are to any of these questions.** Again, feel free to leave out any questions which you would rather not answer.

1. Have you ever had sexual intercourse? (Going all the way...i.e., with penetration)
   (1) Yes (2) No

2. How many times have you had sexual intercourse?
   (1) I have never had sexual intercourse
   (2) Once
   (3) 2-5 times
   (4) more than 5 times

3. With how many different partners have you had sexual intercourse?
   (1) I have never had sexual intercourse
   (2) 1 partner
   (3) 2-5 times
   (4) more than 5 times

4. How old were you when you first had sexual intercourse?
   (1) I have never had sexual intercourse
   (2) 11 or younger
   (3) 12
   (4) 13
   (5) 14
   (6) 15
   (7) 16
   (8) 17
   (9) 18
   (10) 10 or older

5. How would you describe your condition when you first had sexual intercourse?
   (1) I have never had sexual intercourse
   (2) sober
   (3) had a few drinks
   (4) drunk
   (5) stoned
   (6) I don't remember
   (7) Other_____

6. Were you coerced (heavily persuaded) into having your first sexual intercourse?
   (1) I have never had sexual intercourse
   (2) Yes, I felt coerced. I did not really want to do it
   (3) No, I did not feel coerced. I was quite willing to have sex at that time

7. Where did you have your first intercourse?
   (1) I have never had sexual intercourse
   (2) at home
   (3) at my partner's home
   (4) at someone else's home
   (5) in a vehicle
   (6) other_____

8. Who initiated (wanted to have) sexual intercourse first?
   (1) I have never had sexual intercourse
   (2) I did
   (3) my partner did
   (4) we both did
   (5) I don't remember

9. Did you discuss birth control with your partner before having intercourse?
   (1) I have never had sexual intercourse
   (2) Yes
   (3) No, but we talked about birth control after having intercourse
   (4) No, we have never talked about birth control, either before or after having intercourse

10. Who initiated the discussion (first brought up the subject) about birth control?
   (1) I have never had sexual intercourse
   (2) I did
   (3) my partner did
   (4) I have had sexual intercourse but I have never discussed birth control
   (5) I don't remember

11. Did you use any form of birth control when you had your first sexual experience?
   (1) I have never had sexual intercourse
   (2) Yes
   (3) No
   (4) I don't remember
   (5) I don't know

12. If you used a method of birth control, please identify the method used:
   (1) I have never had sexual intercourse
   (2) Did not use birth control
   (3) Birth control pill
   (4) Withdrawal
   (5) Vaginal spermicides
   (6) Condom
   (7) Diaphragm
   (8) Others_____ (write in)

13. If you did not use birth control, would you please explain why you chose not to
    (1) I have never had sexual intercourse
    (2) I just didn't think about it
    (3) other_____
    _____

14. The following adjectives have been used by young people to describe their first sexual experience. Please check off the one(s) that you feel best describe your emotions about your first encounter with sex. Check as many as you feel best describe your emotions at that time.

    (1) I have never had sexual intercourse
    (2) Guilty
    (3) Afraid
    (4) Raped
    (5) Anxious
    (6) Worried
    (7) Betrayed
    (8) Hurt
    (9) Wonderful
    (10) Stimulated
    (11) Loved
    (12) Mature, Grown-up
    (13) Fulfilled
    (14) Excited
    (15) Superior
    (16) Other_____

15. Who influenced you to make your decision to have sexual intercourse? (please write a 1 beside the one who influenced you the most, a 2 beside the next and so on until you have ranked all those you feel have most influenced you)
    ___(1) I have never had sexual intercourse
    ___(2) sexual partner
    ___(3) friends
    ___(4) mother
    ___(5) father
    ___(6) sibling(s) (brother or sister)
    ___(7) school classes (e.g., CALM)
    ___(8) TV and/or movies
    ___(9) magazines or other print materials
    ___(10)other_____ (write in)

16. Who influenced you to make your decision NOT to have sexual intercourse?

(please write a 1 beside the one who influenced you the most, a 2 beside the next and so on until you have ranked all those you feel have influenced you)
    ___(1) I am sexually active
    ___(2) my partner
    ___(3) friends
    ___(4) mother

___(5) father
___(6) sibling(s) (brother or sister)
___(7) school classes (e.g., CALM)
___(8) TV and/or movies

17. From whom have you received your knowledge about sex? (please write a 1 beside the one who influenced you the most, a 2 beside the next and so on until you have ranked all those you feel have influenced you)
___(1) I am sexually active
___(2) my partner
___(3) friends
___(4) mother
___(5) father
___(6) sibling(s) (brother or sister)
___(7) school classes (e.g., CALM)
___(8) TV and/or movies

18. Have you ever been pregnant?
(1) Yes
(2) No
(3) Irrelevant because I am female

19. Have you ever got a girl pregnant?
(1) Yes
(2) No
(3) Irrelevant because I am female

20. If you have been pregnant did you...
(1) I have never been pregnant
(2) Keep the baby
(3) Have an abortion
(4) Give the baby up for adoption
(5) This question is not relevant to me because I am male
(6) Other_____(write in)

21. If you have got a girl pregnant, did you...
(1) I have never got a girl pregnant
(2) Decide with the girl to keep the baby
(3) Decide with the girl to have an abortion
(4) Decide with the girl to give the baby up for adoption
(5) I was not part of the decision made
(6) I did not agree with the decision made
(7) This question is not relevant to me because I am female
(8) Other_____(write in)

Thank you. Please go on to Part 5 now.

**Part 5 – Comments**

The final say is yours. Please feel free to make any comments on these as well as any other issues you feel are important this time.

Once again, please remember that your answers are completely confidential and voluntary. No one will ever know what your particular answers are to any of these questions. You may omit questions which you would rather not answer.

1. Explain what "going steady" means in your opinion in your school.

2. How long do you think a person should go with someone before becoming sexually active?

3. Do you now, or have you in the past, felt any pressure to become sexually active?

(1) Yes (2) No

If you answered yes, from who or what do you feel pressure? You may identify more than one. (please do not use any names, just give the relationship e.g., friend, mom, TV.)

4. Do you now, or have you in the past, felt any pressure to abstain from sex, or to NOT become sexually active?

(1) Yes (2) No

If you answered yes, from who or what do you feel pressure? You may identify more than one. (please do not use any names, just give the relationship e.g., friend, mom, TV.)

5. Do you think it is realistic of educators and health officials, as well as, parents, to expect teenagers to practice abstinence (to not have sex)?

(1) Yes (2) No

Please explain why or why not.

6. Please feel free to make any final comments you like about teenage dating behaviours, teenage sexual behaviours and/or anything you feel may be of benefit to the researchers about this topic.

Thank you for your participation.